REMOVAL PROGRAM
PRELIMINARY ASSESSMENT/
SITE INVESTIGATION REPORT
FOR
HENRY'S DRY CLEANERS
LACONIA, BELKNAP COUNTY, NEW HAMPSHIRE
6 OCTOBER 2011, 27 FEBRUARY 2012, 14 MARCH 2012, 19-23 MARCH 2012, AND 26-30 MARCH 2012

Prepared For:

U.S. Environmental Protection Agency
Region I
Emergency Planning and Response Branch
5 Post Office Square, Suite 100
Boston, MA 02109-3912

CONTRACT NO. EP-W-05-042

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Submitted By:

Weston Solutions, Inc.
Region I
Superfund Technical Assessment and Response Team III (START)
3 Riverside Drive
Andover, MA 01810

July 2012

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I. Preliminary Assessment / Site Investigation Forms

EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT

Site Name and Location

Name: Henry's Dry Cleaners **Location:** 36 Pleasant Street
Town: Laconia **County:** Belknap **State:** New Hampshire (NH)

Site Status: **( ) NPL** **(✓) NON-NPL** **( ) RCRA** **( ) TSCA**
(✓) ACTIVE **( ) ABANDONED** **( ) OTHER**

(✓) Attached USGS Map of Location **(✓) Site I.D. No.:** 01HT

Latitude: 43° 31' 40.7" North **Longitude:** 71° 28' 15.5" West

Referral

( ) Citizen **( ) City/Town** **(✓) State** **( ) Preremedial**
( ) RCRA **( ) Other:**

Name of referring party: New Hampshire Department of Environmental Services (NH DES)
Telephone: (603) 271-3503
Address: 29 Hazen Drive, Concord, New Hampshire 03301

Contacts Identified

1) John Regan **Telephone:** (603) 271-3744
2) Ralph Wickson **Telephone:** (603) 271-6572

Source of Information

( ) Verbal:
(✓) Reports:

Heynen Engineers. 1986. *Re: Environmental Site Assessment Allen Rogers Corporation, 54 Water Street, Laconia, New Hampshire*. 24 July.

Consla Geotechnical Engineering, Inc. 1990. *Site Remediation Assessment Allen-Rogers Corporation, Laconia, New Hampshire.* 22 October.

EnviroSense, Inc. 1994. *Workscope for Site Investigation.* 28 December.

EnviroSense, Inc. 1997. *Site Investigation Report.*17 February.

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CPI Environmental Services, Inc. 2004. *Supplemental Site Investigation Chlorinated Solvent and Lead Investigation*. 29 March.

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CPI Environmental Services, Inc. 2006. *Groundwater Quality Assessment NHDES No. 199011032*. 26 May.

CPI Environmental Services, Inc. 2006. *Soil Excavation Delineation Report*. 14 July.

CPI Environmental Services, Inc. 2006. *Supplemental Groundwater Quality Report*. 23 August.

GeoInsight, Inc. 2007. *Supplemental Site Investigation, Former Allen Rogers Mill, 54 Water Street, Laconia, New Hampshire, NHDES Site #199011032*. 9 March.

GeoInsight, Inc. 2007. *Additional Investigation Report – 2007 Former Allen Rogers Mill, 54 Water Street, Laconia, New Hampshire, NHDES Site #199011032.* 29 June.

GeoInsight, Inc. 2007. *Groundwater Sampling Summary Laconia Millworks, LLC (Former Allen Rogers Mill) 54 Water Street, Laconia, New Hampshire, NHDES Site #199011032*. 11 January.

GeoInsight, Inc. 2008. *2007-2008 Annual Summary Report Laconia Millworks, LLC (Former Allen Rogers Mill) 54 Water Street, Laconia, New Hampshire, NHDES Site #199011032*. 12 June.

GeoInsight, Inc. 2009. *November 2008 Ground Water Sampling Summary*. 15 January.

Sovereign Consulting, Inc. 2009. *Sampling Trip Report – Henry's Dry Cleaners Site*. 21 August.

Sovereign Consulting, Inc. 2010. *Final Site Inspection Report – February 26, 2010 Henry's Dry Cleaners, Laconia, NH.* 2 March.

(✓) Other:

GeoInsight, Inc. 2007. Indoor Air Sampling Scope of Work-Building #6. 9 February.

GeoInsight, Inc. 2007. Data Transmittal – Indoor Air Sampling Results – Building #6. 2 May.

GeoInsight, Inc. 2007. Presumptive Remedy Recommendation, Lead Impacted Soil. 17 August.

GeoInsight, Inc. 2007. Data Transmittal – August 2007 Indoor Air Sampling Results – Building #6. 18 October.

GeoInsight, Inc. 2008. Data Transmittal – July 2008 Indoor Air Sampling Results – Building #6. 5 September.

GeoInsight, Inc. 2009. Presumptive Remedy Completion, Lead Impacted Soil. 16 June.

Potential Responsible Parties

Owners: Pauline Smith and Donna Smith **Telephone:** (603) 524-3406
Address: 36 Pleasant Street, Laconia, New Hampshire 03246

Operators: Pauline Smith and Donna Smith **Telephone:** (603) 524-3406
Address: 36 Pleasant Street, Laconia, New Hampshire 03246

Site Access

Authorizing Person: Pauline and Donna Smith
Date: 6 October 2011 **(✓) Obtained** **( ) Verbal**
Telephone: (603) 524 -3406 **( ) Not Obtained** **(✓) Written**

Historical Preservation

( ) Site is Historically Significant or Eligible for Historic Preservation

Contacts Identified

1) State Historical Preservation Officer (SHPO)

Name: Mrs. Nancy Muller **Telephone:** (603) 271-3483

2) Tribal Historical Preservation Officer (THPO)
Name: **Telephone:** ( )
Comments:

REMOVAL PRELIMINARY ASSESSMENT

Physical Site Characterization

Background Information: The Henry's Dry Cleaners site (the site) is located at 36 Pleasant Street, Laconia, Belknap County, NH. The site is currently an active dry cleaning business, located in a commercial area in downtown Laconia. The geographic coordinates, as measured from the entrance to the property, are 43° 31' 40.7" north latitude and 71° 28' 15.5" west longitude. The site is an approximately 0.1-acre parcel that is occupied by a 2,398-square-foot (ft^2), one-story, rectangular building that was constructed in 1946. The southern portion of the building is constructed on a concrete slab foundation, and the northern portion of the building is constructed over a full basement. Dry cleaning operations are conducted on the first floor of the building. The basement contains a refrigerated vault for fur storage, an old boiler room, two air compressors, and a water heater. The site also encompasses an asphalt-paved driveway and parking areas. The site is bordered by Pleasant Street to the north, a Goodwill Industries building to the east, a parking area and Beacon Street to the south, and the Laconia Savings Bank property to the west. The Former Allen Rogers Mill (FARM) property is located south-southwest, and hydraulically downgradient, of the Henry's Dry Cleaners site. Two of the FARM property buildings have been renovated into condominiums and are now the Beacon Street West Condominiums (BSWC).

Background Description of Substances Possibly Present, Known or Alleged: Based on analytical sampling data obtained during previous investigations, volatile organic compounds (VOCs) are present in on-site soils and in the groundwater beneath the site and surrounding areas. Between 1963 and 1989, 13 underground storage tanks (USTs) and numerous aboveground storage tanks (ASTs) were removed from the FARM property [see Appendix A, GeoInsight, Inc., Site Plan, Figure No. 2, from GeoInsight Letter Report regarding AST Closure, Former Allen Rogers Mill, dated 15 November 2007]. Tanks ranged in size from 500 to 20,000 gallons and contained gasoline, ethyl alcohol, butyl alcohol, No. 2 fuel oil, No. 6 heating oil, diesel fuel, acetone, lacquer thinner, and hydrocarbon solvent (synasol). Tetrachloroethylene (PCE) was detected for the first time in groundwater beneath the FARM property during a 1986 Environmental Site Assessment by Heynen Engineers. Analytical results of a groundwater sample obtained from groundwater monitoring well HE-2 indicated PCE at a concentration of 36 micrograms per Liter (µg/L). From 1986 to present, several investigations have been conducted by various consultants at the site and at the FARM property and have confirmed the presence of chlorinated VOCs (CVOCs) in groundwater. Investigations have indicated that a source of VOC contamination in groundwater likely exists upgradient of the FARM property.

Existing Analytical Data

( ) Real-Time Monitoring Data: None

(✓) Sampling Data: From 1986 to 2006, several rounds of groundwater samples were collected from monitoring wells located on the BSWC property, where the FARM once operated. The primary objective of these sampling rounds was to evaluate petroleum contamination following the removal of USTs and ASTs. In 1986, PCE was detected in groundwater beneath the FARM property during an Environmental Site Assessment by Heynen Engineers. Additional investigations were conducted by EnviroSense, Inc. (EnviroSense) and CPI Environmental Services, Inc. (CPI) to locate potential

upgradient CVOC sources that were impacting groundwater beneath the FARM property. EnviroSense concluded that the source of CVOC contamination was unknown and recommended additional investigations. CPI concluded that the source originated from an off-site upgradient property, and NH DES subsequently agreed with CPI's conclusion.

Initial EPA investigations conducted at Henry's Dry Cleaners included an EPA Pre-Remedial Investigation in 2008. NH DES requested EPA assistance to investigate Henry's Dry Cleaners as a possible upgradient source of CVOCs that were detected in groundwater beneath the FARM property. Sovereign Consulting, Inc., (Sovereign), EPA's Superfund Technical Assistance and Response Team (START) 8A contractor, conducted an on-site reconnaissance in December 2008, and conducted field activities during June and July 2009. Field activities consisted of advancing five shallow borings and installing monitoring wells in four of the borings, collecting groundwater samples from the four monitoring wells, and collecting subsurface soil samples during boring advancement. PCE was detected at concentrations exceeding NH DES Soil Standards in four of the subsurface soil samples obtained for analysis. In addition, PCE was detected at concentrations exceeding NH DES Ambient Groundwater Quality Standards (AGQS) in four of the groundwater samples obtained.

Potential Threat

Evaluation of the following criteria, as identified in 40 CFR 300.415 [The National Oil and Hazardous Substances Pollution Contingency Plan (NCP)], is typically performed during a preliminary assessment/site investigation for the purpose of conducting a removal action.

i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants.

ii. Actual or potential contamination of drinking water supplies or sensitive ecosystems.

iii. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.

iv. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.

v. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

vi. Threat of fire or explosion.

vii. The availability of other appropriate federal or state response mechanisms to respond to the release.

viii. Other situations or factors that may pose threats to public health or welfare or the environment.

REMOVAL PRELIMINARY ASSESSMENT

Prior Response Activities

( ) PRP **(✓) STATE** **(✓) FEDERAL** **( ) OTHER**

Brief Description: Previous groundwater investigations overseen by NH DES focused only on portions of the FARM property, and were conducted by various consultants over a long period of time using different soil classification and groundwater sampling techniques. Numerous investigations conducted by EnviroSense, CPI, and GeoInsight, Inc. (GeoInsight) have suggested that CVOCs present in groundwater beneath the FARM property are attributable to an off-site, upgradient source. Previous investigations of the Henry's Dry Cleaners site conducted by EPA include a 2009 Site Inspection, which indicated elevated levels of CVOCs in on-site soil and groundwater beneath the site.

Priority for Site Investigation

(✓) High **( ) Medium** **( ) Low** **( ) None**

Comments:

Report Generation

Originator:	Colin Cardin	**Date:**	29 June 2012
Affiliation:	Weston Solutions, Inc. (START)	**Telephone:**	(978) 552-2115
TDD No.:	01-11-09-0007	**Task No.:**	0752

EPA REGION I
REMOVAL SITE INVESTIGATION

Inspection Information

Site Name: Henry's Dry Cleaners **Address:** 36 Pleasant Street
Town: Laconia **County:** Belknap **State:** New Hampshire (NH)

Date of Inspection: 6 October 2011 **Time of Inspection:** 0900 hours (hrs) - 1100 hrs
Date of Inspection: 27 February 2012 **Time of Inspection:** 0900 hrs - 1030 hrs
Date of Inspection: 14 March 2012 **Time of Inspection:** 0900 hrs - 1100 hrs
Date of Inspection: 19 March 2012 **Time of Inspection:** 1500 hrs - 1700 hrs
Date of Inspection: 20 March 2012 **Time of Inspection:** 0700 hrs - 1930 hrs
Date of Inspection: 21 March 2012 **Time of Inspection:** 0700 hrs - 1830 hrs
Date of Inspection: 22 March 2012 **Time of Inspection:** 0700 hrs - 1730 hrs
Date of Inspection: 23 March 2012 **Time of Inspection:** 0700 hrs - 1730 hrs
Date of Inspection: 26 March 2012 **Time of Inspection:** 0700 hrs - 1830 hrs
Date of Inspection: 27 March 2012 **Time of Inspection**: 0700 hrs - 1745 hrs
Date of Inspection: 28 March 2012 **Time of Inspection:** 0700 hrs - 1815 hrs
Date of Inspection: 29 March 2012 **Time of Inspection:** 0700 hrs - 1900 hrs
Date of Inspection: 30 March 2012 **Time of Inspection**: 0700 hrs - 1700 hrs

Weather Conditions: 6 October 2011 - Partly cloudy, 55 degrees Fahrenheit (° F)
27 February 2012 - Sunny, 40° F
14 March 2012 - Overcast, 40° F
19 March 2012 - Partly cloudy, 60° F
20 March 2012 - Sunny, 75° F
21 March 2012 - Sunny, 80° F
22 March 2012 - Sunny, 80° F
23 March 2012 - Breezy, 60° F
26 March 2012 - Windy, 35° F
27 March 2012 - Windy, 30° F
28 March 2012 - Flurries, 30° F
29 March 2012 - Overcast, 35° F
30 March 2012 - Sunny, 55° F

Site Status at Time of Inspection: (✓) ACTIVE ( ) INACTIVE

Comments: The site is currently owned by Ms. Pauline Smith and Ms. Donna Smith, who also operate Henry's Dry Cleaners.

REMOVAL SITE INVESTIGATION

Agencies/Personnel Performing Inspection		
	Names	**Program**
(✓) EPA:	Janis Tsang	U.S. Environmental Protection Agency (EPA) Region I Emergency Planning and Response Branch (EPRB)
	Scott Clifford	U.S. EPA Office of Environmental Measurement and Evaluation (OEME)
	Alan Humphrey Terrence Johnson Dave Mickunas Henry Gerard	U.S. EPA Environmental Response Team (ERT)
(✓) EPA Contractor:	George Mavris Colin Cardin Greg Parrish Christine Dupree Andrew Danikas Mark Hall Bill Mahany Eric Ackerman	Weston Solutions, Inc. (Weston), Superfund Technical Assessment and Response Team III (START)
(✓) State:	Ralph Wickson John Regan Robin Mongeon David Larson	New Hampshire Department of Environmental Services (NH DES)
(✓) Other:	David Edgerton Scott Thompson Danielle McCall William Weeks Gmae Loy Scott Thompson	Lockheed Martin, Inc. Scientific, Engineering, Research, and Analytical Services (SERAS)
	Lars Andresen Charlene Sullivan	Blackey Geophysics, Inc.
	Michael Jordan Matt Millard Kevin Kieper	Stone Environmental, LLC (Weston Subcontractor)

REMOVAL SITE INVESTIGATION

(✓) Other	Names	Program
	Scott Myers Dave Keets Paul Moynihan Seth Nuttelman	City of Laconia
	Geoff Spitzer	Chinburg Builders
	Meghan Broderick	GeoInsight, Inc.
	Ted McKean Linda Bitzer	Beacon Street West Condominium (BSWC) Association

Current Owner Based on Field Interview: Pauline and Donna Smith

Physical Site Characteristics

Parameter	Quantities/Extent
( ) Cylinders:	
( ) Drums:	
( ) Lagoons:	
(✓) Tanks: (✓) Above:	A 275-gallon heating oil tank was located along the south wall inside the building.
( ) Below:	
(✓) Asbestos:	The floor tile and mastic of the Henry's Dry Cleaner's building were sampled for asbestos-containing material (ACM) and analyzed by Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analyses. Floor tile samples were found to contain chrysotile asbestos, while the mastic samples did not.
( ) Piles:	
( ) Stained Soil:	
( ) Stressed Vegetation:	
( ) Landfill:	
(✓) Population in Vicinity:	Approximately 4,715 people live within 1 mile of the site. No residences are located within 200 feet (ft) of the site. Holy Trinity School and Jack & Jill Nursery School are located approximately 0.2 miles north-northeast of the site at 50 and 52 Church Street, respectively. The BSWC, a residential condominium complex, is located across the

street (south) from Henry's Dry Cleaners, at the Former Allen Rogers Mill (FARM) property. The two occupied BSWC buildings, Building Nos. 6 and 8, are located approximately 300 and 450 ft downgradient from the Henry's Dry Cleaners property.

(✓) Wells: **(✓) Monitoring:** There are 12 known monitoring wells located throughout the Henry's Dry Cleaners, City of Laconia, and FARM properties. The nearest drinking water well is located hydraulically upgradient of the site; therefore, impacts to nearby drinking water supplies are unlikely.

( ) Drinking:

Physical Site Observations

The Henry's Dry Cleaners site (the site) is an active dry cleaning facility located at 36 Pleasant Street in Laconia, New Hampshire. The site parcel is identified on the City of Laconia Map Number (No.) 432, Block No. 186, as Lot No. 7. The 0.1-acre site is occupied by a 2,398-square-foot (ft^2) one-story building constructed in 1946. The site also encompasses an asphalt-paved driveway and parking areas. The site is bordered by Pleasant Street to the north, a building and property occupied by Goodwill Industries to the east, a parking area and Beacon Street to the south, and the Laconia Savings Bank property to the west. The southern portion of the building is constructed on a concrete slab foundation, and the northern portion of the building is constructed over a full basement. The customer service counter and clean clothing rack area are located in the northern portion of the building, and the dry cleaning machine and hazardous waste storage area are located in the southern portion of the building. Dry cleaning operations are conducted on the first floor, and a fur storage room is located in the basement. The floor around the base of the dry cleaning machine was observed to be an unsealed concrete slab. Small containers of spot cleaning chemicals were stored in a refrigerator in the same room as the dry cleaning machine. A functional air compressor, a non-operating air compressor, a water heater, and the building's only floor drain were located in the old boiler room. Pipe wrappings and floor tiles (possibly ACM) were noted in the boiler room. A 275-gallon heating oil tank was located along the south wall inside the building.

The BSWC, a residential condominium complex, is located across the street (south) from Henry's Dry Cleaners, at the FARM property. The Winnipesaukee River forms the southern boundary of the FARM property.

REMOVAL SITE INVESTIGATION

Field Sampling and Analysis

Matrix/Analytical Parameter	Field Instrumentation CGI/O_2	RAD	PID/VOC	FID	Other[3]
Background Readings:	0.0%/20.9 %	9 - 12 µR/hr[1]	0.0 ppm[2]	0.0 ppm	0/0
Air:	0.0%/20.9 %	9 - 12 µR/hr	0.0 ppm	0.0 ppm	0/0
Soil:	0.0%/20.9 %	9 - 12 µR/hr	0.0 ppm	0.0 ppm	0/0
Surface:					
Water:					
Tanks:					
Drums:					
Vats:					
Lagoons:					
Spillage:					
Sediments:					
Groundwater:	0.0%/20.9 %	9 - 12 µR/hr	>2,300 uab[4]	0.0 ppm	0/0
Other (Headspace on Samples):	0.0%/20.9 %	9 - 12 µR/hr	0 ppm	0 ppm	0/0
Other (Chemical Storage Refrigerator):	0.0%/20.9 %	9 - 12 µR/hr	>30 uab	0 ppm	0/0

1 µR/hr = microRoentgens per hour
2 ppm = parts per million
3 Carbon monoxide (CO)/hydrogen sulfide (H_2S)
4 Monitoring well MW-101D had a headspace reading of >2,300 units above background (uab); MW-101S had a headspace reading of 6.4 uab.

Field Quality Control Procedures

(✓) SOP Followed **( ) Deviation From SOP**

Comments: START followed the protocol outlined in the document entitled, *Sampling and Analysis Plan for the Henry's Dry Cleaners Site, Laconia, Belknap County, New Hampshire*, dated March 2012.

Description of Sampling Conducted

On 14 March 2012, START member Mark Hall mobilized to the Henry's Dry Cleaners site and met with NH DES representatives John Regan and Ralph Wickson to survey the flooring of the Henry's Dry Cleaners building, and to collect representative floor tile and mastic samples for asbestos analysis. A total of five samples were collected, including a field duplicate, and were submitted to ProScience Analytical Services of Woburn, Massachusetts for TEM and PLM analyses.

REMOVAL SITE INVESTIGATION

On 20 March through 23 March, and 26 March through 30 March 2012, EPA On-Scene Coordinator (OSC) Janis Tsang coordinated and supervised groundwater sampling of the monitoring wells, indoor air sampling, sub-slab soil vapor sampling, and the advancement of soil borings using a Geoprobe equipped with a membrane interface probe (MIP) for continuous real time analysis. Numerous representatives from EPA, START, NH DES, Stone Environmental, LLC, and the City of Laconia were present to assist and contribute expertise to the various activities.

From 20 through 23 March 2012, START collected 15 groundwater samples (GW-01 through GW-15), including a field duplicate, from 12 groundwater monitoring wells (GEO-1 through GEO-6, NW-3, MW-101S, MW-101D, MW-102, MW-103, and OSW-1). Groundwater monitoring well NW-3 is a nested well and is constructed with three sampling ports at three distinct depths (NW-3C, NW-3B, NW-3A). EPA Chemist Scott Clifford performed on-site screening of the groundwater samples for volatile organic compounds (VOCs) [tetrachloroethylene (PCE) and trichloroethylene (TCE) only], utilizing an EPA Mobile Laboratory. Groundwater samples were also submitted to the EPA OEME New England Regional Laboratory (NERL) of North Chelmsford, Massachusetts for VOC and semivolatile organic compounds (SVOC) analyses.

From 27 through 30 March 2012, EPA Chemist Clifford performed field screening of 72 soil samples for PCE and TCE. Ten soil samples from six borings were selected for confirmatory laboratory analysis for VOCs, as follows (with the number in parentheses indicating sample depth interval in feet): MIP-4 (10-11), MIP-4 (13-14)A, MIP-4 (23-24), MIP-3 (16-17), MIP-3 (18-19), MIP-16 (22-23), MIP-16 (31-32), MIP-30 (20-21), MIP-17 (23-24), and SB-31 (17-17.5). Nine soil samples from six borings were selected for laboratory SVOC analysis, as follows: MIP-4 (3-4), MIP-4 (23-24), MIP-14 (14-15), MIP-30 (6-7), MIP-30 (18-19), MIP-17 (8-9), SB-31 (2-3), MIP-24 (12-13), and MIP-24 (8-9). Soil samples submitted for laboratory analysis were analyzed by OEME NERL.

From 27 through 29 March 2012, START collected 12 soil samples to be analyzed for Total Petroleum Hydrocarbons (TPH). TPH analysis included Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Oil Range Organics (ORO). The following samples were collected from eight borings: MIP-3 (16-17), MIP-3 (19-20), MIP-4 (13-14), MIP-14 (10-15), MIP-17 (5-10), MIP-21 (0-5), MIP-21 (5-10), MIP-21 (5-10)A, MIP-24 (5-10), MIP-24 (10-15), MIP-30 (0-5), and SB-31 (0-5). Samples were submitted to Lockheed Martin SERAS for laboratory analysis by Accutest Laboratories (Accutest), Dayton, New Jersey.

From 27 through 30 March 2012, START collected seven soil samples from seven borings for total organic carbon (TOC) analysis: MIP-3 (10-11), MIP-4 (34-35), MIP-14 (20-21), MIP-17 (15-16), MIP-24 (20-21), MIP-30 (18-19), MIP-16 (14-15). A total of six soil samples from four borings were analyzed for dry bulk density: MIP-4 (19-24), MIP-16 (13-14), MIP-24 (16-17), MIP-16 (45-46), MIP-4 (35-36), MIP-3 (18-19). Soil samples analyzed for TOC and dry bulk density were submitted to Alpha Analytical Laboratory (Alpha), Westborough, Massachusetts.

REMOVAL SITE INVESTIGATION

On 30 March 2012, START collected two investigation-derived waste (IDW) samples: one soil sample and one aqueous sample. Each sample was obtained from a separate 55-gallon drum. The samples were analyzed for flashpoint, pH, Resource Conservation and Recovery Act (RCRA) metals, polychlorinated biphenyls (PCBs), pesticides, SVOCs, and VOCs. IDW samples were submitted to OEME NERL for analysis.

A description of results obtained from the continuous real time analysis of the MIP can be found in Attachment A, *Source Investigation Activities and Preliminary Conceptual Site Model (CSM) of the Henry's Dry Cleaners Chlorinated Solvent Site, Laconia, New Hampshire, SERAS Work Assignment No. 0-173, Technical Memorandum*. Detailed information on the indoor/outdoor ambient air sampling, soil vapor sampling, and real-time air monitoring using the Trace Atmospheric Gas Analyzer (TAGA) can be found in Attachment B, *Henry's Dry Cleaners Site, Laconia, New Hampshire, SERAS Work Assignment No. 0-167 Trip Report.*

Analyses

Analytical Parameter	Media	Laboratory
(✓) VOC	**(✓) AIR**	**(✓) NERL (OEME)**
( ) PCB	**(✓) WATER**	**( ) CLP**
( ) PESTICIDE	**(✓) SOIL**	**(✓) PRIVATE**
( ) METALS	**( ) SOURCE**	**( ) SAS**
( ) CYANIDE	**( ) SEDIMENT**	**( ) SOW**
(✓) SVOC	**(✓) BULK ACM**	**(✓) FIELD**
( ) TOXICITY		
( ) DIOXIN		
(✓) ASBESTOS		

(✓) OTHER - TPH, TOC, dry bulk density
(✓) IDW - Samples collected for disposal characterization and submitted for PCB, pesticide, metals, flashpoint, and pH analyses.
IDW = Investigation-Derived Waste
ACM = Asbestos-Containing Material

Receptors

	Comments
( ) Drinking Water	
(✓) Private:	One private drinking water well is reportedly located within 0.5 miles of the site. It is located to the northeast and hydraulically upgradient of the site. Based on the direction of groundwater flow and the locations of private and public drinking water wells in the area, impacts to nearby drinking water supplies are unlikely.

REMOVAL SITE INVESTIGATION

( ) Municipal:

(✓) Groundwater: Based on the most recent groundwater elevation data collected in March 2012, groundwater beneath the site area ranges from approximately 3.75 feet (ft) to 12.75 ft below the ground surface. Groundwater flow direction, based on depth-to-groundwater data and an elevation survey conducted in March 2012, presumably flows south toward the Winnipesaukee River. The hydraulic gradient of the horizontal groundwater flow is approximately 0.009.

(✓) Unrestricted Access: Pedestrian access to the site is not restricted.

(✓) Population in Proximity: Approximately 4,715 people live within a 1-mile radius of the site.

( ) Sensitive Ecosystem:

(✓) Other: According to NH National Heritage Bureau (NHB) data, one state-threatened bird species habitat (Bald Eagle) is located between 2- and 3-radial miles from the site.

Additional Procedures for Site Determination

( ) Biological Evaluation **(✓) ATSDR**

EPA has requested NH DES Environmental Health Program (EHP), through cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), to perform a health evaluation using the sub-slab data obtained during the 2012 EPA Site Investigation.

Site Determination

Depending on further information, criteria that may be met by the site include 40 CFR 300.415 [b] [2], parts:

i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants.

ii. Actual or potential contamination of drinking water supplies or sensitive ecosystems.

v. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

vii. The availability of other appropriate federal or state response mechanisms to respond to the release.

viii. Other situations or factors that may pose threats to public health or welfare or the environment.

Report Generation

Originator:	Colin Cardin	**Date:**	18 June 2012
Affiliation:	Weston Solutions, Inc. (START)	**Telephone:**	(978) 552-2115
TDD No.:	01-11-09-0007	**Task No.:**	0752

II. Narrative Chronology

NARRATIVE CHRONOLOGY

Site Description and History

The Henry's Dry Cleaners (Henry's) site (the site) is located at 36 Pleasant Street, Laconia, Belknap County, New Hampshire (NH) (see Appendix A, Figure 1). Henry's is currently an active dry cleaning business located in a commercial area in downtown Laconia. The site is currently owned by Ms. Pauline Smith and Ms. Donna Smith, who also operate Henry's Dry Cleaners. The geographic coordinates, as measured from the entrance to the property, are 43° 31' 40.70" north latitude and 71° 28' 15.5" west longitude [1]. The approximately 0.1-acre site is occupied by a 2,398-square-foot (ft^2), one-story, rectangular building and a paved driveway and parking areas [2]. The southern portion of the building is constructed on a concrete slab foundation, and the northern portion of the building is constructed over a full basement. Dry cleaning operations are conducted on the first floor of the building; and the basement contains a refrigerated vault for fur storage, an old boiler room, two air compressors, and a water heater. The site is registered with the New Hampshire Department of Environmental Services (NH DES) as a Conditionally Exempt Small Quantity Generator (CESQG), which indicates that the facility generates less than 100 kilograms (Kg) per month of non-acute hazardous waste. The site is bordered by Pleasant Street to the north, a Goodwill Industries building to the east, a parking area and Beacon Street to the south, and the Laconia Savings Bank property to the west (see Appendix A, Figure 2). The Beacon Street West Condominium (BSWC), a residential condominium complex, is located across the street from Henry's, at the Former Allen Rogers Mill (FARM) property. The FARM property is located south-southwest, and hydraulically downgradient, of the Henry's site. The Winnipesaukee River forms the southern boundary of the FARM property. Two buildings located on the FARM property (Building Nos. 6 and 8) have been converted into BSWC condominium units.

From 1986 to 2006, several rounds of groundwater samples were collected from existing monitoring wells located on the BSWC property, where the FARM once operated [2; 5; 6; 7]. Previous groundwater investigations conducted under the oversight of NH DES focused only on sections of the BSWC property, and were conducted by various consultants using different soil classification and groundwater sampling techniques. The primary objective of these sampling rounds was to evaluate petroleum contamination following the removal of underground storage tanks (USTs) and aboveground storage tanks (ASTs). Initial groundwater sampling investigations revealed chlorinated volatile organic compound (CVOC) contamination in groundwater beneath the BSWC property.

In 2006, CPI Environmental Services, Inc. (CPI) installed nested groundwater monitoring wells at three locations on the BSWC property and collected groundwater samples in an effort to determine the extent and possible source(s) of CVOC contamination in groundwater beneath the property [5]. Each nested well consisted of a shallow, intermediate, and deep screened interval. Tetrachloroethylene (PCE) was detected in the groundwater samples at concentrations exceeding NH DES Ambient Groundwater Quality Standards (AGQS) [7]. CPI suspected a potential off-site source of chlorinated solvents, either associated with the mill building north of Water Street

or the Henry's property [5]. Henry's Dry Cleaners was subsequently referred by NH DES to the U.S. Environmental Protection Agency (EPA), Region 1.

On 26 February 2010, Sovereign Consulting, Inc. (Sovereign) submitted a Final Site Inspection Report to EPA, Region 1 regarding field activities conducted in 2008 and 2009. The objectives of the Site Inspection were as follows: (1) to document a threat or potential threat to public health or the environment posed by the Henry's site; (2) to assess the need for additional detailed investigation and/or response action at the site; and (3) to provide EPA Region 1 with adequate information to determine whether the site may be eligible for placement on the National Priorities List (NPL) [2]. On 10 December 2008, Sovereign personnel and an NH DES representative met with the property owner to conduct a site reconnaissance as part of the Site Inspection. During June and July 2009, soil borings were advanced and soil samples were collected. All soil borings were advanced to various depths using a hollow stem auger drill rig. Soil boring depths varied based on field-screening results, observations, and subsurface conditions. Five soil samples (SB-101S, SB-101D, SB-102, SB-103, and SB-104), including a field duplicate, were collected from the soil borings. Following the soil borings, four monitoring wells (MW-101S, MW-101D, MW-102, and MW-103) were installed to various shallow depths. On 12 and 13 August 2009, Sovereign collected five groundwater samples (GW-101S, GW-101D, GW-102, GW-103, and GW-104), including a field duplicate, from the four newly installed monitoring wells. Soil and groundwater samples were submitted for analyses for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), target analyte list (TAL) metals, mercury, and cyanide. Based on analytical results, 14 VOCs [including PCE, trichloroethylene (TCE), and cis-1,2-dichloroethylene (cis-1,2-DCE)], six SVOCs, and two pesticides were detected in soil samples at concentrations exceeding reference concentrations. Three VOCs (PCE, TCE, and cis-1,2-DCE), one SVOC, one pesticide, and three metals were detected in groundwater samples at concentrations exceeding reference concentrations [2].

Sovereign concluded that subsurface soil and groundwater beneath the Henry's property had been impacted by VOCs, SVOCs, and pesticides, and that substances detected in groundwater considered attributable to on-site sources (e.g., a dry cleaning machine, and contaminated soil) included PCE, TCE, and DCE.

Site Activities

6 October 2011

On 6 October 2011, EPA On-Scene Coordinator (OSC) Janis Tsang; Weston Solutions, Inc. Superfund Technical Assessment and Response Team (START) representative George Mavris; and NH DES representative Ralph Wickson performed a reconnaissance of the Henry's site and surrounding areas. EPA and NH DES interviewed the property owner and her daughter and conducted a walk-through of the facility. The customer service counter and clean clothing rack area were observed in the northern portion of the building; and the dry cleaning machine and hazardous waste storage area were located in the southern portion of the building. Based on observations and discussions with the property owner, dry cleaning operations are conducted on the first floor, and a fur storage room is located in the basement. The floor around the base of the

dry cleaning machine was observed to be an unsealed concrete slab. Small containers of spot cleaning chemicals were stored in a refrigerator in the same room as the dry cleaning machine. Continuous air monitoring was performed using a MultiRAE Plus photoionization detector (PID) equipped with a combustible gas indicator/oxygen meter (CGI/O_2) (MultiRAE) and a Model 19A Radiation (Rad) Meter. No readings were detected above background levels in the ambient air until the door of the refrigerator, containing small containers of spot cleaning chemicals, was opened. A pronounced chemical odor was noted when the refrigerator door was opened, and the MultiRAE reading in the ambient air rapidly increased to 30 units above background. The door was quickly closed, and personnel stepped away from the area. A functional air compressor, a non-operating air compressor, a water heater, and the building's only floor drain were located in the old boiler room. Pipe wrappings, possibly asbestos-containing material (ACM), were noted in the boiler room. A 275-gallon heating oil tank was observed along the south wall inside the building. Other than when the refrigerator door was opened, no readings above background levels were recorded in the ambient air inside the building. The team proceeded outside and walked around the building and observed site features (monitoring wells, parking area, buildings). The team entered the Goodwill Industries Building (Goodwill Building) located next to Henry's and conducted a walk-through of the Goodwill Building with the manager. Continuous air monitoring with the MultiRAE was conducted, and no readings were detected above background levels. The team then proceeded to the south side of the FARM property and observed buildings, the Winnipesaukee River, Perley Canal, and the parking lot.

27 February 2012

On 27 February 2012, START inspected nine monitoring wells in the area of Henry's Dry Cleaners and the FARM property to determine if they were viable for groundwater sampling. During the inspection, START conducted air monitoring of each well's headspace using a MultiRAE. START noted a PID headspace reading of greater than 2,300 units at deep monitoring well MW-101D, located south of the Henry's Dry Cleaners building, and a PID reading of 6.4 units on the headspace of monitoring well MW-101S. A slight septic-like odor was noted during the inspection of monitoring well NW-3A (the deepest of the nested wells).

14 March 2012

On 14 March 2012, START member Mark Hall mobilized to the Henry's Dry Cleaners site and met with NH DES representatives John Regan and Ralph Wickson to survey the building's flooring and to collect representative floor tile and mastic samples for asbestos analysis. START collected five samples, including a duplicate, for submittal to ProScience Analytical Services in Woburn, Massachusetts, for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analyses.

19 March 2012

On 19 March 2012, START member George Mavris mobilized to the Henry's Dry Cleaners site. At 1500 hours, START member Mavris arrived on site and met with OSC Janis Tsang and NH DES representatives Ralph Wickson and John Regan. Following a discussion with the owners of Henry's Dry Cleaners, START member Mavris, OSC Tsang, and NH DES representatives

inspected the hallways of Building No. 6 and No. 8 on the FARM property. START member Mavris and OSC Tsang had a brief discussion regarding mobilization and sample shipment. All personnel departed the site.

20 March 2012

START members George Mavris, Colin Cardin, Christine Dupree, Andrew Danikas, Greg Parrish, and Mark Hall arrived on site in the parking lot behind BSWC, which was designated as the site meeting location. The EPA Mobile Command Post (MCP) was mobilized to the FARM property to serve as a command post. START member Mavris conducted a safety and operations meeting, and on-site personnel reviewed and signed the health and safety plan (HASP). The HASP was prepared as a separate document, entitled *Weston Solutions, Inc., Region I START Site Health and Safety Plan (HASP) for the Henry's Dry Cleaners Site, Laconia, Belknap County, New Hampshire* [3]. The tailgate safety meeting included a discussion of safety practices, overall goals, and scope of work for the site. Personnel representing the following entities were present: EPA; Environmental Response Team (ERT); Scientific, Engineering, Response, and Analytical Services (SERAS); Superfund Technical Assessment and Response Team (START); Stone Environmental, Inc. (Stone); Blackey Geophysics; and the City of Laconia.

After the Health and Safety meeting, representative personnel from the City of Laconia and Blackey Geophysics began clearing locations for the Membrane Interface Probe (MIP) borings. SERAS personnel began their preparation for conducting indoor air, sub-slab vapor, and outdoor air sampling activities. A description of SERAS investigations is included in Attachment B, *Henry's Dry Cleaners Site, Laconia, New Hampshire, SERAS Work Assignment No. 0-167 – Trip Report.* START personnel began setting up equipment for low-flow groundwater sampling activities. START sampling activities were performed in accordance with the site Sampling and Analysis Plan (SAP), which was prepared as a separate document, entitled *Sampling and Analysis Plan for the Henry's Dry Cleaners Site, Laconia, Belknap County, New Hampshire* [4]. Stone began advancing borings in the vicinity of Henry's using a Geoprobe® direct-push technology drill rig equipped with an MIP. The following MIP borings were completed (with the depth at which refusal was encountered in parentheses): MIP-01 (24 ft); MIP-02 (21 ft); MIP-03 (16 ft); MIP-03A (22 ft); and MIP-04 (21 ft). START collected groundwater samples, for VOC and SVOC analyses, from the following groundwater monitoring wells: GEO-1; GEO-2; GEO-3; GEO-4; GEO-5; GEO-6; and NW-3A (see Appendix E, Chain-of-Custody Records). EPA Chemist Scott Clifford was on site to perform field screening analysis of groundwater samples for PCE and TCE, using the EPA Mobile Laboratory. START personnel completed activities for the day and departed.

21 March 2012

Representatives from EPA, ERT, START, SERAS, Stone, Blackey Geophysics, and the City of Laconia assembled in the parking lot behind the BSWC. A tailgate safety meeting was conducted, in addition to a discussion of the prior day's events and the subsequent tasks for the remainder of the week. The geophysical team continued to mark and clear boring locations on the FARM property. SERAS personnel continued the collection of indoor air and vapor samples

in addition to conducting real-time monitoring using the Trace Atmospheric Gas Analyzer (TAGA). GeoInsight, Inc. was on site to collect indoor air samples in Building No. 6 (see Appendix A, Figure 2). START continued groundwater sampling activities. Stone continued advancing MIP borings on the Henry's and the adjacent Goodwill Industries properties. The following MIP borings were completed (with the depth at which refusal was encountered in parentheses): MIP-05 (28 ft); MIP-06 (29 ft); MIP-07 (29 ft); MIP-08 (34 ft); MIP-09 (33 ft); MIP-10 (26 ft); and MIP-11 (25 ft). START collected groundwater samples, for VOC and SVOC analyses, from the following groundwater monitoring wells: MW-101D, MW-102, MW-103, NW-3B, and NW-3C (see Appendix E, Chain-of-Custody Records). Throughout site activities, START photodocumented the site (see Appendix D, Photodocumentation Log). START secured two drums containing purge water and decontamination water, and staged them behind the Henry's Dry Cleaners building. The drums were placed on pallets and labeled accordingly. START personnel departed for the day.

22 March 2012

A tailgate safety meeting was conducted to address safety issues and the scope of work for the remaining tasks. The services of Blackey Geophysics were no longer required, and their representative personnel did not return to site. SERAS continued air sampling and monitoring activities. START completed groundwater sampling activities after collecting groundwater samples from groundwater monitoring wells MW-101S and OSW-1 (see Appendix E, Chain-of-Custody Records). Groundwater samples were relinquished to START member Bill Mahany and delivered to the U.S. EPA New England Regional Laboratory (NERL) in Chelmsford, MA. START personnel installed transducers in the following groundwater monitoring wells: GEO-6, GEO-5, GEO-1, and GEO-3. Stone continued to advance MIP borings in pre-marked locations on the Henry's, Goodwill Industries, and FARM properties. The following MIP borings were completed (with the depth at which refusal was encountered in parentheses): MIP-12 (19 ft); MIP-13 (22 ft); MIP-14 (22 ft); MIP-15 (27 ft); MIP-16 (45 ft); MIP-17 (36 ft). Investigation-derived waste (IDW) was secured in 55-gallon drums, and site conditions were photodocumented. START member Mavris discussed increasing the total MIP footage with OSC Janis Tsang, based on recommendations by ERT member Terrence Johnson. OSC Tsang extended the MIP footage by 500 ft, for a total of 1,500 ft. START members Cardin, Dupree, Danikas, and Parrish packed unneeded equipment and demobilized from the site.

23 March 2012

A tailgate health and safety meeting was conducted. SERAS demobilized from the site, having completed their assigned tasks. Stone continued to advance MIP borings on the FARM property. The following MIP borings were completed (with the depth at which refusal was encountered in parentheses): MIP-18 (40 ft); MIP-19 (40 ft); MIP-20 (33 ft); MIP-21 (25 ft); MIP-22 (27 ft); and MIP-23 (18 ft). IDW drums were secured, and personnel departed from the site.

26 March 2012

A tailgate health and safety meeting was conducted. A SERAS geophysicist was on site to clear additional locations for MIP borings. Stone encountered an overheating problem with the

generator on their box truck. Stone then obtained a rental generator, and continued performing MIP activities at location MIP-24. START member Mavris downloaded data from the four previously installed transducers. START member Mavris then proceeded to Laconia City Hall to meet with environmental planner Shanna Saunders to obtain historical information on the site area. Ms. Saunders was unable to provide any documents and referred START member Mavris to the Laconia Department of Public Works (DPW) for maps of the site area. START member Mavris proceeded to Laconia DPW and made copies of several Sanborn maps before returning to site. The following MIP borings were completed (with the depth at which refusal was encountered in parentheses): MIP-24 (31 ft); MIP-25 (28 ft); MIP-26 (27 ft); and MIP-27 (40 ft). IDW drums were checked and secured. All personnel departed from site.

27 March 2012

A site health and safety meeting was conducted, with a discussion of safety practices as well as a review of the previous day's activities and remaining tasks. Stone continued MIP activities beginning at location MIP-28. START member Parrish was on site to assist with soil sample collection and soil classification. START members Mavris and Parrish downloaded stored data from the four previously installed transducers. The transducers were then removed and decontaminated. Stone completed their MIP activities and prepared to advance borings using macrocore liners. The following MIP borings were completed (with the depth at which refusal was encountered in parentheses): MIP-28 (40 ft); MIP-29 (28 ft); MIP-30 (30 ft). The following samples were selected for laboratory analyses (with the sample depth and analysis provided in parentheses): MIP-30 (0-5', TPH); MIP-30 (6-7', SVOCs); MIP-30 (18-19', SVOCs); MIP-30 (20-21', VOCs); and MIP-30 (18-19', TOC) (see Appendix E, Chain-of-Custody Records). EPA Chemist Scott Clifford was on site to perform field screening analysis of soil samples for PCE and TCE using the EPA Mobile Laboratory. Soil cuttings were secured in the IDW drum designated for soil. START member Mavris photodocumented site conditions, and all personnel departed for the day.

28 March 2012

A tailgate safety meeting was conducted to discuss health and safety issues and the scope of work for the day. START member Eric Ackerman was contacted to bring supplies to the site. Stone set up equipment at the MIP-17 (SB-17) location to begin coring using 5-ft macrocores. START members Ackerman and Cardin arrived on site to perform an elevation survey of monitoring wells GEO-1 through GEO-6, OSW-1, MW-101S, MW-101D, MW-102, and MW-103. Monitoring wells were surveyed at the ground surface and the top of the inner polyvinyl chloride (PVC) casing. START members Ackerman and Cardin surveyed the ground elevation at the 30 MIP locations and then departed from the site. The following borings were completed (with the depth at which refusal was encountered in parentheses): MIP-17 (37.5 ft); MIP-21 (15 ft); SB-31 (17.5 ft); MIP-24 (24.5 ft). The following samples were selected for laboratory analysis (with sample depth and analysis provided in parentheses): MIP-17 (8-9', SVOCs); MIP-17 (23-24', VOCs); SB-31 (2-3', SVOCs); SB-31 (17-17.5', VOCs); MIP-24 (12-13', SVOCs); MIP-24 (8-9', SVOCs); MIP-17 (5-10', TPH); MIP-21 (0-5', TPH); MIP-21 (5-10', TPH); MIP-21 (5-10A, TPH); MIP-24 (5-10', TPH); MIP-24 (10-15', TPH); SB-31 (0-5', TPH); MIP-17 (15-16', TOC); MIP-24 (20-21', TOC); and MIP-24 (16-17', Dry Bulk Density) (see Appendix E,

Chain-of-Custody Records). OSC Janis Tsang, ERT representative Terrence Johnson, SERAS representative Dave Edgerton, and START member Mavris discussed having Stone bring a rotary drill rig to the site. OSC Tsang requested that Stone mobilize a rotary drill rig. Mike Jordan of Stone provided a cost estimate for mobilizing the drill rig and the cost per foot of operation. START member Mavris contacted the START office to request that the necessary funding be secured to account for the rotary drill rig. In addition, OSC Tsang approved the request to have an additional START member on site on 29 March 2012 to perform data management activities utilizing EPA Scribe database software. IDW drums were secured, and all personnel departed for the day.

29 March 2012

A tailgate health and safety meeting was conducted to discuss health and safety issues and the remaining work to be completed. START member Mahany was on site to complete Scribe activities. Stone set up rotary drill rig equipment at location MIP-14 and began augering. The following borings were completed (with the depth at which refusal was encountered in parentheses): MIP-14 (23 ft); MIP-4 (36 ft); and MIP-3 (17 ft). The following samples were selected for confirmatory analysis (depth and analysis are provided in parentheses): MIP-14 (14-15', SVOCs); MIP-4 (3-4', SVOCs); MIP-4 (10-11', VOCs); MIP-4 (13-14A, VOCs); MIP-4 (23-24', VOCs); MIP-4 (23-24', SVOCs); MIP-3 (16-17', VOCs); MIP-3 (18-19', VOCs); MIP-3 (16-17', TPH); MIP-3 (19-20', TPH); MIP-4 (13-14', TPH); MIP-14 (10-15', TPH); MIP-3 (10-11', TOC); MIP-4 (34-35', TOC); MIP-14 (20-21', TOC); MIP-4 (19-24', Dry Bulk Density); MIP-4 (35-36', Dry Bulk Density); MIP-3 (18-19', Dry Bulk Density) (see Appendix E, Chain-of-Custody Records). Samples for Total Petroleum Hydrocarbons (TPH) analysis were submitted to Accutest Laboratories (Accutest), Dayton, New Jersey, for laboratory analysis. Drilling and soil collection activities were completed for the day. IDW drums were secured, and all personnel departed from the site.

30 March 2012

A tailgate health and safety meeting was conducted. Topics included safety issues, drilling activities, IDW sampling, and sample delivery to the U.S. EPA Office of Environmental Management and Evaluation (OEME) New England Regional Laboratory (NERL). Stone began drilling activities at the MIP-16 location with the rotary drill rig. The following samples were selected for laboratory analysis (with sample depth and analysis in parentheses): MIP-16 (22-23', VOCs); MIP-16 (31-32', VOCs); MIP-16 (13-14', Dry Bulk Density); MIP-16 (45-46', Dry Bulk Density); MIP-16 (14-15', TOC) (see Appendix E, Chain-of-Custody). IDW samples were collected for disposal purposes. One sample was collected from an aqueous drum, and one sample was collected from a soil drum. START member Bill Mahany departed the site and delivered the samples to NERL in North Chelmsford, Massachusetts. IDW samples were submitted for the following analyses: flashpoint, pH, Resource Conservation and Recovery Act (RCRA) metals, PCBs, pesticides, SVOCs, and VOCs. Soil samples were submitted to Alpha Analytical Laboratory (Alpha), Westborough, Massachusetts, for Total Organic Carbon (TOC) analysis and Dry Bulk Density analysis. OSC Tsang and SERAS member David Edgerton secured the tops on the three aqueous IDW drums and four soil IDW drums, and departed the site.

Analytical Data Summaries

Groundwater:

Volatile Organic Compounds

On 26 and 28 March 2012, and 4 April 2012, START received the analytical results from OEME for the groundwater samples collected from 20 through 23 March 2012. The VOC data are summarized in Appendix B, Table 1. Table 2 depicts the results of the groundwater screening performed on site. Complete analytical results may be found in Appendix C.

Analytical results received from OEME indicated that CVOCs were detected in 10 of the 15 groundwater samples collected from the monitoring wells. PCE was detected at the following groundwater monitoring well locations (concentration in parentheses): GEO-4 [150 micrograms per liter (µg/L)], GEO-1 (70 µg/L), NW-3B (3,700 µg/L), NW-3C (11,000 µg/L), OSW-1 (6,400 µg/L), MW-101D (15,000 µg/L), MW-101S (70 µg/L), and MW-102 (420 µg/L) (see Appendix B, Table 1) [8, 9]. All PCE concentrations listed above exceed the NH DES Ambient Groundwater Quality Standards (AGQS) of 5 µg/L for PCE. Trichloroethylene (TCE) was detected in MW-102 (12 µg/L), MW-101S (3.4 µg/L), GEO-4 (140 µg/L), GEO-1 (120 µg/L), and GEO-3 (9.2 µg/L) (see Appendix B, Table 1) [8, 9]. With the exception of MW-101S, all other TCE detections listed above exceed the NH DES AGQS of 5 µg/L for TCE.

CVOC concentrations in groundwater samples are depicted in Appendix A, Figure 3.

Semivolatile Organic Compounds

On 26 and 28 March 2012, START received the analytical results from OEME for the groundwater samples collected from 20 through 23 March 2012. The SVOC data are summarized in Appendix B, Table 3. Complete analytical results may be found in Appendix C.

Analytical results received from OEME indicated that diethylphthalate was detected in three of the 12 groundwater monitoring well samples collected [11, 12]. No NH DES AGQS exists for diethylphthalate.

Soil:

Volatile Organic Compounds

On 23 April 2012, START received the analytical results from OEME for the soil samples collected from 27 through 30 March 2012. The data are summarized in Appendix B, Table 4. Table 5 presents the results of soil screening performed on site. Complete analytical results can be found in Appendix C.

Analytical results received from OEME indicate the presence of at least one VOC in nine of the 10 soil samples analyzed for VOCs. PCE was detected in MIP 3 (16-17') [34,000 micrograms per Kilogram (µg/Kg)], MIP 3 (18-19') (35,000 µg/Kg), MIP 4 (10-11') (16,000 µg/Kg), MIP 4 (13-14')A (240 µg/Kg), MIP 4 (23-24') (5,500 µg/Kg), MIP 16 (22-23') (1,500 µg/Kg), MIP 16 (31-32') (1,000 µg/Kg), MIP 17 (23-24') (490 µg/Kg), and SB-31 (17-17.5') (89 µg/Kg) (see Appendix B, Table 4) [10]. Four of the soil samples contained PCE at levels exceeding the New Hampshire Department of Environmental Services (NH DES) S-1 Soil Standards of 2,000 µg/Kg for PCE [10].

Descriptions and results obtained from the continuous real-time analysis of the MIP can be found in Attachment A: *Source Investigation and Preliminary Conceptual Site Model (CSM) of the Henry's Dry Cleaner Chlorinated Solvent Site, Laconia, New Hampshire, SERAS Work Assignment No. 0-173, Technical Memorandum.*

Semivolatile Organic Compounds

On 5 April 2012, START received the analytical results from OEME for the soil samples collected from 27 through 30 March 2012. The data are summarized in Appendix B, Table 6. Complete analytical results can be in found in Appendix C.

Analytical results received from OEME show the detection of 11 SVOCs in the soil samples submitted for analysis. All other SVOCs were below laboratory method detection limits. Benzo(a)anthracene was detected in sample SB-31 (2-3') at a concentration of 3,200 µg/Kg, exceeding the NH DES S-1 Soil Standard of 1,000 µg/Kg. No other SVOC detected exceeded NH DES S-1 Soil Standards [13].

Total Petroleum Hydrocarbons

On 25 April 2012, START received the analytical results from Accutest Laboratory for TPH analysis of the soil samples collected from 27 through 29 March 2012. The data are summarized in Appendix B, Table 7. Complete analytical results can be in found in Appendix C.

Analytical results received from Accutest Laboratory indicated the presence of TPH in 10 of the 12 soil samples submitted for analysis [14]. No values detected exceed the NH DES S-1 Soil Standard of 10,000 mg/Kg for TPH.

Total Organic Carbon

On 17 April 2012, START received the analytical results from Alpha Analytical Laboratory for TOC analysis of the soil samples collected from 27 through 30 March 2012. The data are summarized in Appendix B, Table 8. TOC ranged from percent values of 0.017% to 0.167% in the seven soil samples submitted for analysis [15]. Complete analytical results can be found in Appendix C.

Air:

Volatile Organic Compounds

Detailed information on the indoor/outdoor ambient air sampling, soil gas sampling, and real-time air monitoring using the TAGA can be found in Attachment B: *Henry's Dry Cleaners Site, Laconia, New Hampshire, SERAS Work Assignment No. 0-167 Trip Report*.

Asbestos:

Analytical results received from ProScience Laboratory indicate that chrysotile asbestos was detected in three of the floor tile samples at the following concentrations: 18.59%, 17.04%, and 19.55%. No asbestos was detected in the two floor mastic samples submitted for laboratory analysis [16, 17].

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[13] U.S. Environmental Protection Agency, New England Regional Laboratory, Office of Environmental Measurement and Evaluation. April 2012. Laboratory Report, Project Number 12030029, BNAs in Soils Medium Level, High Level Method, Henry's Dry Cleaners – Laconia, New Hampshire.

[14] Lockheed Martin, Scientific, Engineering Response and Analytical Services. Accutest LabLink. April 2012. 12 Soil Samples for GRO, DRO, ORO. Preliminary Results of Project: Henry's Dry Cleaners WA#0173.

[15] Alpha Analytical. Analytical Report. April 17, 2012. TOC Analysis. Henry's Dry Cleaners.

[16] ProScience Analytical Services, Inc. March 15, 2012. EPA/600/R-93/116, Polarized Light Microscopy (PLM) analyses.

[17] ProScience Analytical Services, Inc. March 15, 2012. EPA/600/R-93/116, Transmission Electron Microscopy (TEM).

[18] GeoInsight, Inc. Re: AST Closure (Solvent Tank#s 1, 2, 3 and 4) Former Allen Rogers Mill 54 Water Street Laconia, New Hampshire NHDES # 199011032

III. Appendices

Appendix A

Figures

Figure 1	-	Site Location Map
Figure 2	-	Site Diagram
Figure 3	-	Chlorinated Volatile Organic Compound Concentrations in Groundwater Samples 20-22 March 2012
(Figure 4)	-	Figure No. 2, Site Plan - from GeoInsight, Inc., Letter Report regarding AST Closure, Former Allen Rogers Mill, 54 Water Street, Laconia, New Hampshire, dated 15 November 2007

Figure 1

Site Location Map

Henry's Dry Cleaners
54 Water Street
Laconia, NH

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number:	11-09-0007
Created by:	C. Cardin
Created on:	29 February 2012
Modified by:	
Modified on:	

Data Sources:
Topos: MicroPath/USGS
Quadrangle Name(s): Laconia, NH
All other data: START

WESTON SOLUTIONS
Restoring Resource Efficiency

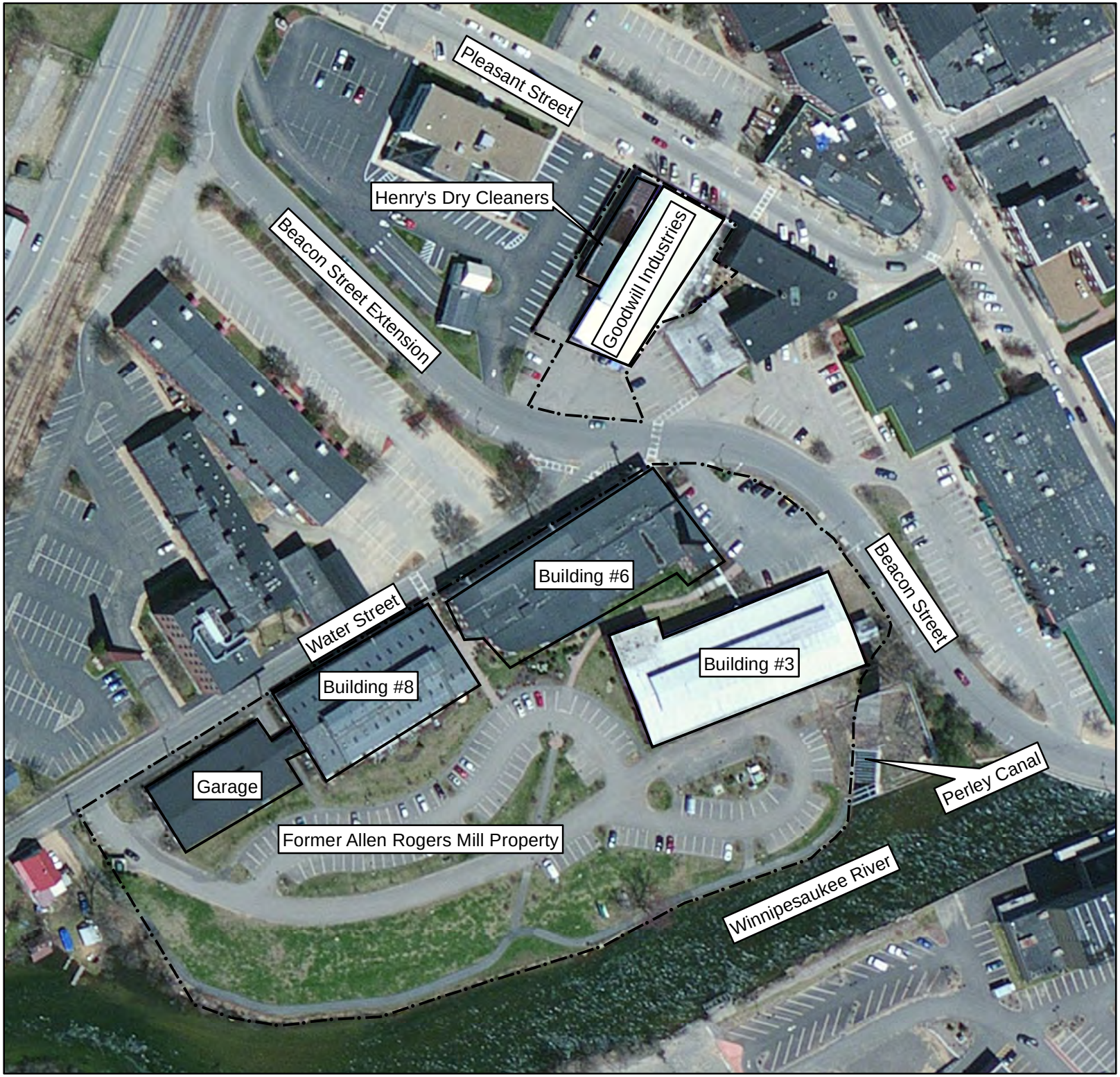

Figure 2

Site Diagram

Henry's Dry Cleaners
36 Pleasant Street
Laconia, New Hampshire

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number:	11-09-0007
Created by:	B. Mahany
Created on:	6 March 2012
Modified by:	C. Cardin
Modified on:	23 June 2012

LEGEND

Buildings

Approximate Property Boundaries

0 50 100 Feet

Data Sources:
Imagery: Bing Maps
Topos: MicroPath
All other data: START

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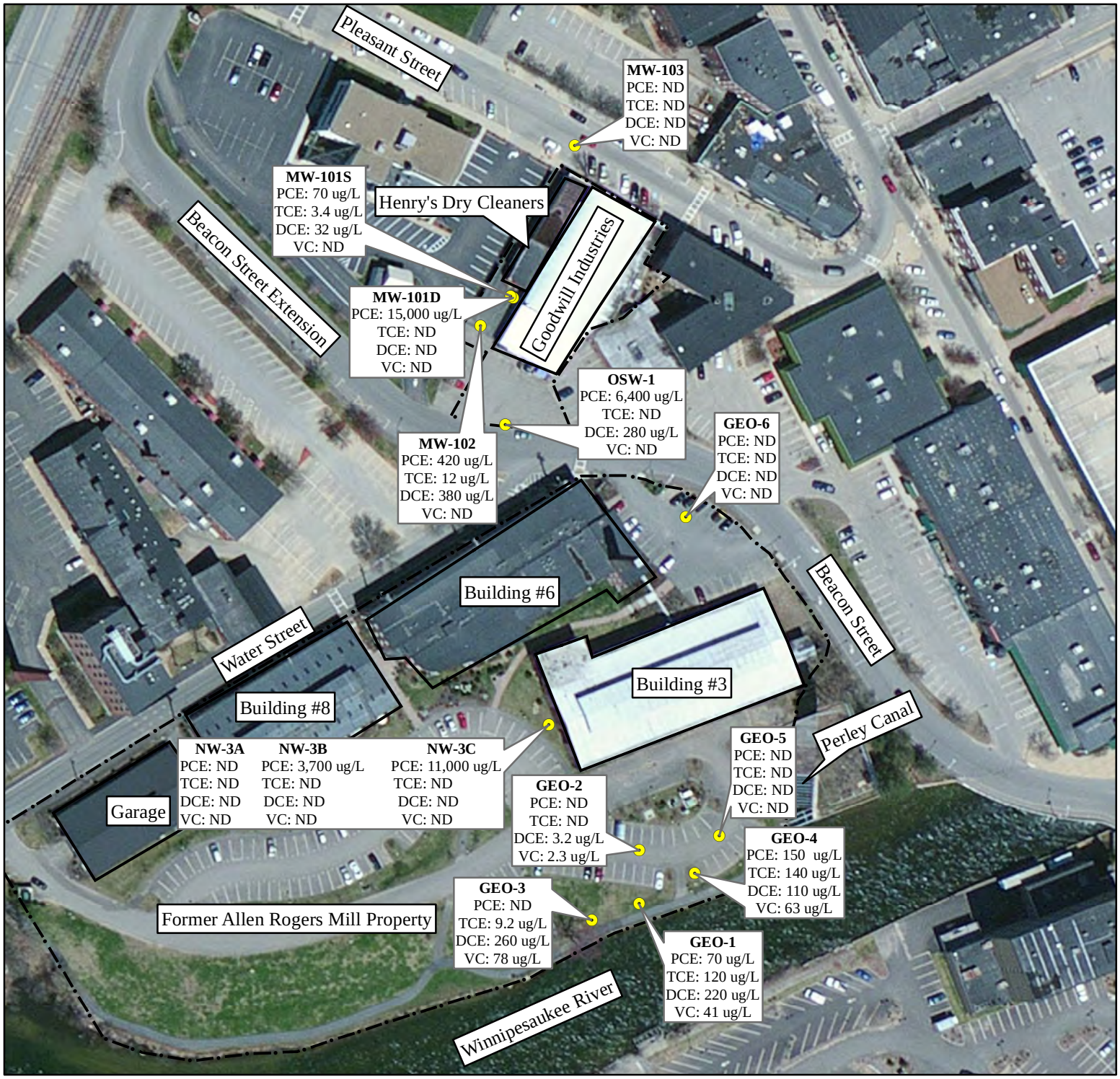

Figure 3

Chlorinated Volatile Organic Compound Concentrations in Groundwater Samples 20-22 March 2012

Henry's Dry Cleaners Site
36 Pleasant Street
Laconia, New Hampshire

EPA Region I
Superfund Technical Assessment and Response Team (START) III
Contract No. EP-W-05-042

TDD Number: 11-09-0007
Created by: B. Mahany
Created on: 16 March 2012
Modified by: C. Imbres
Modified on: 11 July 2012

LEGEND

- Groundwater Monitoring Well
- Buildings
- Approximate Property Boundaries

PCE: Tetrachloroethylene
TCE: Trichloroethylene
DCE: cis-1,2-Dichloroethylene
VC: Vinyl Chloride
ND: Not Detected
ug/L: micrograms per liter

0 50 100 Feet

Data Sources:
Imagery: Bing Maps
Topos: MicroPath
All other data: START

WESTON SOLUTIONS
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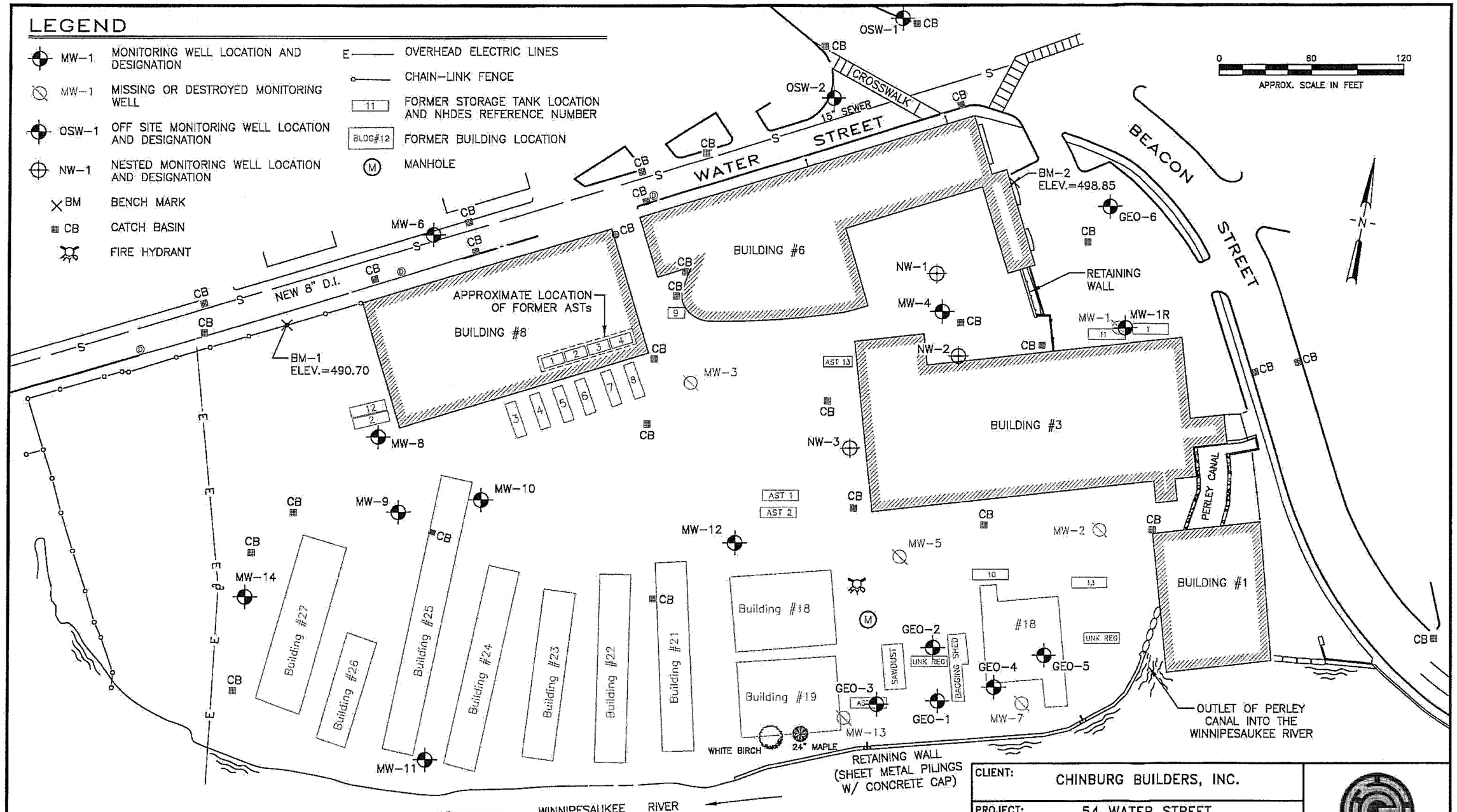

NOTES:

1. THIS FIGURE WAS BASED UPON "SITE PLAN" PREPARED BY CONTINENTAL PLACER, INC. AND DATED MAY 26, 2006.
2. ALL LOCATIONS ARE APPROXIMATE.
3. BENCH MARK (BM-1) IS NAIL LOCATED AT BASE OF UTILITY POLE 5C, PSNH 109/10. BENCH MARK (BM-2) IS TOP CORNER OF GRANITE PLANTER.

CLIENT: CHINBURG BUILDERS, INC.			
PROJECT: 54 WATER STREET LACONIA, NEW HAMPSHIRE			
TITLE: SITE PLAN			
DESIGNED: LMG	DRAWN: STM	CHECKED: LMG	APPROVED: MCP
SCALE: 1" = 60'	DATE: 11/14/07	FILE NO.: 4899d001	PROJECT NO.: 4899-000
FIGURE NO.: 2			

GeoInsight
Practical in Nature

PLOT DATE: 11-14-07
FILE: I:\4899\4899d001.dwg

Appendix B

Data Summary Tables

Table 1 - Summary of Volatile Organic Compound Results, Groundwater Samples
Table 2 - Summary of Volatile Organic Compound Field Screening Results, Groundwater Samples
Table 3 - Summary of Semivolatile Organic Compound Results, Groundwater Samples
Table 4 - Summary of Volatile Organic Compound Results, Soil Samples
Table 5 - Summary of Volatile Organic Compound Field Screening Results, Soil Samples
Table 6 - Summary of Semivolatile Organic Compound Results, Soil Samples
Table 7 - Summary of Total Petroleum Hydrocarbon Preliminary Results, Soil Samples
Table 8 - Summary of Total Organic Carbon Results, Soil Samples

TABLE 1

SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
GROUNDWATER SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	GW-01	GW-02	GW-03	GW-04	GW-05	GW-06	GW-07	NHDES AGQS
WELL LOCATION:	GEO-5	GEO-4	GEO-1	GEO-2	GEO-3	NW-3A	NW-3B	
SAMPLE NUMBER:	R01-120314JT-0006	R01-120314JT-0007	R01-120314JT-0008	R01-120314JT-0009	R01-120314JT-0010	R01-120314JT-0011	R01-120314JT-0012	
LABORATORY NUMBER:	AB28160	AB28161	AB28162	AB28163	AB28164	AB28165	AB28170	µg/L
PARAMETER								
2-Propanone (acetone)	ND	ND	ND	ND	ND	ND	ND	6,000
Tetrachloroethylene	ND	**150**	**70**	ND	ND	ND	**3,700**	5
trans-1,2-Dichloroethylene	ND	ND	ND	ND	3.7	ND	ND	100
Trichloroethylene	ND	**140**	**120**	ND	**9.2**	ND	ND	5
Vinyl Chloride	ND	**63**	**41**	**2.3**	**78**	ND	ND	2
cis-1,2-Dichloroethylene	ND	**110**	**220**	3.2	**260**	ND	ND	70

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I Standard Operating Procedure (SOP) EIASOP-VOAGCMS9 - VOAs in Water.
2) All Results in Micrograms per Liter (µg/L).
3) NHDES AGQS = New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards (equivalent to NHDES Method 1 GW-1 Groundwater Standards), May 2007.
4) Bolded and shaded results exceed NHDES AGQS.
5) ND = Not Detected.
6) B = Analyte is associated with the laboratory blank or trip blank contamination.
7) Note that summary tables do not include analytes that were not detected. Refer to Appendix C for all analytical results.

TABLE 1

SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
GROUNDWATER SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	GW-08	GW-09	GW-10	GW-11	GW-12	GW-13	GW-14	NHDES AGQS
WELL LOCATION:	NW-3C	GEO-6	OSW-1	MW-102	MW-101D	MW-101S	MW-103	
SAMPLE NUMBER:	R01-120314JT-0013	R01-120314JT-0014	R01-120314JT-0015	R01-120314JT-0016	R01-120314JT-0017	R01-120314JT-0018	R01-120314JT-0019	
LABORATORY NUMBER:	AB28171	AB28166	AB28177	AB28172	AN28173	AB28178	AB28174	µg/L
PARAMETER								
2-Propanone (acetone)	ND	ND	ND	ND	ND	3.4	1.5 B	6,000
Tetrachloroethylene	**11,000**	ND	**6,400**	**400**	**15,000**	**70**	ND	5
trans-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	100
Trichloroethylene	ND	ND	ND	**10**	ND	3.4	ND	5
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	2
cis-1,2-Dichloroethylene	ND	ND	**280**	**370**	ND	32	ND	70

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I Standard Operating Procedure (SOP) EIASOP-VOAGCMS9 - VOAs in Water.
2) All Results in Micrograms per Liter (µg/L).
3) NHDES AGQS = New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards (equivalent to NHDES Method 1 GW-1 Groundwater Standards), May 2007.
4) Bolded and shaded results exceed NHDES AGQS.
5) ND = Not Detected.
6) B = Analyte is associated with the laboratory blank or trip blank contamination.
7) Note that summary tables do not include analytes that were not detected. Refer to Appendix C for all analytical results.

TABLE 1

SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
GROUNDWATER SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	GW-15	NHDES AGQS µg/L
WELL LOCATION:	MW-102	
SAMPLE NUMBER:	R01-120314JT-0020	
LABORATORY NUMBER:	AB28175	
PARAMETER		
2-Propanone (acetone)	ND	6,000
Tetrachloroethylene	**420**	5
trans-1,2-Dichloroethylene	ND	100
Trichloroethylene	**12**	5
Vinyl Chloride	ND	2
cis-1,2-Dichloroethylene	**380**	70

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I Standard Operating Procedure (SOP) EIASOP-VOAGCMS9 - VOAs in Water.
2) All Results in Micrograms per Liter (µg/L).
3) NHDES AGQS = New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards (equivalent to NHDES Method 1 GW-1 Groundwater Standards), May 2007.
4) Bolded and shaded results exceed NHDES AGQS.
5) ND = Not Detected.
6) B = Analyte is associated with the laboratory blank or trip blank contamination.
7) Note that summary tables do not include analytes that were not detected. Refer to Appendix C for all analytical results.

TABLE 2

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
GROUNDWATER SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	GW-01	GW-02	GW-03	GW-04	GW-05	GW-06	GW-07	NHDES AGQS
WELL LOCATION:	GEO-5	GEO-4	GEO-1	GEO-2	GEO-3	NW-3A	NW-3B	
SAMPLE NUMBER:	AB28193	AB28192	AB28190	AB28191	AB28194	AB28195	AB28197	µg/L
PARAMETER								
Tetrachloroethylene	ND	**291**	**92**	ND	ND	ND	**2,904**	5
Trichloroethylene	ND	**171**	**130**	ND	**9.7**	ND	**8.1**	5

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Liter (µg/L).
3) NHDES AGQS = New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards (equivalent to NHDES Method 1 GW-1 Groundwater Standards), May 2007.
4) Bolded and shaded results exceed NHDES AGQS.
5) ND = Not Detected.
6) Note that summary tables do not include analytes that were not detected. Refer to Appendix C for all analytical results.

TABLE 2

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
GROUNDWATER SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	GW-08	GW-09	GW-10	GW-11	GW-12	GW-13	GW-14	NHDES AGQS
WELL LOCATION:	NW-3C	GEO-6	OSW-1	MW-102	MW-101D	MW-101S	MW-103	
SAMPLE NUMBER:	AB28199	AB28196	AB28204	AB28201	AB28200	AB28203	AB28198	µg/L
PARAMETER								
Tetrachloroethylene	**17,510**	ND	**3,900**	**565**	**21,300**	**67**	ND	5
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	5

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Liter (µg/L).
3) NHDES AGQS = New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards (equivalent to NHDES Method 1 GW-1 Groundwater Standards), May 2007.
4) Bolded and shaded results exceed NHDES AGQS.
5) ND = Not Detected.
6) Note that summary tables do not include analytes that were not detected. Refer to Appendix C for all analytical results.

TABLE 2

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
GROUNDWATER SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	GW-15	NHDES AGQS
WELL LOCATION:	MW-102	
SAMPLE NUMBER:	AB28202	µg/L
PARAMETER		
Tetrachloroethylene	**694**	5
Trichloroethylene	ND	5

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Liter (µg/L).
3) NHDES AGQS = New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards (equivalent to NHDES Method 1 GW-1 Groundwater Standards), May 2007.
4) Bolded and shaded results exceed NHDES AGQS.
5) ND = Not Detected.
6) Note that summary tables do not include analytes that were not detected. Refer to Appendix C for all analytical results.

TABLE 3

SUMMARY OF SEMIVOLATILE ORGANIC COMPOUND RESULTS
GROUNDWATER SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	GW-01	GW-02	GW-03	GW-04	GW-05	GW-06	GW-07	NHDES AGQS µg/L
WELL LOCATION:	GEO-5	GEO-4	GEO-1	GEO-2	GEO-3	NW-3A	NW-3B	
SAMPLE NUMBER:	R01-120314JT-0006	R01-120314JT-0007	R01-120314JT-0008	R01-120314JT-0009	R01-120314JT-0010	R01-120314JT-0011	R01-120314JT-0012	
LABORATORY NUMBER:	AB28160	AB28161	AB28162	AB28163	AB28164	AB28165	AB28170	
PARAMETER								
Diethylphthalate	ND	ND	ND	ND	ND	4.5	ND	NL

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I Standard Operating Procedure (SOP) EIASOP-BNAW2 - BNAs in Water.
2) All Results in Micrograms per Liter (µg/L).
3) NHDES AGQS = New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards (equivalent to NHDES Method 1 GW-1 Groundwater Standards), May 2007.
4) ND = Not Detected.
5) NL = Not Listed.
6) Note that summary tables do not include analytes that were not detected. Refer to Appendix C for all analytical results.

TABLE 3

SUMMARY OF SEMIVOLATILE ORGANIC COMPOUND RESULTS
GROUNDWATER SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	GW-08	GW-09	GW-10	GW-11	GW-12	GW-13	GW-14	NHDES AGQS µg/L
WELL LOCATION:	NW-3C	GEO-6	OSW-1	MW-102	MW-101D	MW-101S	MW-103	
SAMPLE NUMBER:	R01-120314JT-0013	R01-120314JT-0014	R01-120314JT-0015	R01-120314JT-0016	R01-120314JT-0017	R01-120314JT-0018	R01-120314JT-0019	
LABORATORY NUMBER:	AB28171	AB28166	AB28177	AB28172	AN28173	AB28178	AB28174	
PARAMETER								
Diethylphthalate	ND	2.6	2.5	ND	ND	ND	ND	NL

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I Standard Operating Procedure (SOP) EIASOP-BNAW2 - BNAs in Water.
2) All Results in Micrograms per Liter (µg/L).
3) NHDES AGQS = New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards (equivalent to NHDES Method 1 GW-1 Groundwater Standards), May 2007.
4) ND = Not Detected.
5) NL = Not Listed.
6) Note that summary tables do not include analytes that were not detected. Refer to Appendix C for all analytical results.

TABLE 3

SUMMARY OF SEMIVOLATILE ORGANIC COMPOUND RESULTS
GROUNDWATER SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	GW-15	NHDES AGQS µg/L
WELL LOCATION:	MW-102	
SAMPLE NUMBER:	R01-120314JT-0020	
LABORATORY NUMBER:	AB28175	
PARAMETER		
Diethylphthalate	ND	NL

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I Standard Operating Procedure (SOP) EIASOP-BNAW2 - BNAs in Water.
2) All Results in Micrograms per Liter (µg/L).
3) NHDES AGQS = New Hampshire Department of Environmental Services Ambient Groundwater Quality Standards (equivalent to NHDES Method 1 GW-1 Groundwater Standards), May 2007.
4) ND = Not Detected.
5) NL = Not Listed.
6) Note that summary tables do not include analytes that were not detected. Refer to Appendix C for all analytical results.

TABLE 4
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	MIP 3 (16-17')	MIP 3 (18-19')	MIP 4 (10-11')	MIP 4 (13-14') A	MIP 4 (23-24')	MIP 16 (22-23')	MIP 16 (31-32')	NHDES S-1, S-2, S-3 µg/Kg
SAMPLE NUMBER:	R01-120314JT-0084	R01-120314JT-0086	R01-120314JT-0067	R01-120314JT-0068	R01-120314JT-0074	R01-120314JT-0093	R01-120314JT-0101	
LABORATORY NUMBER:	AB28355	AB28356	AB28351	AB28352	AB28353	AB28357	AB28360	
PARAMETER								
Sec-Butylbenzene	ND	ND	ND	400	ND	ND	ND	130,000
Tetrachloroethylene	**34,000**	**35,000**	**16,000**	240	**5,500**	1,500	1,000	2,000

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I Standard Operating Procedure (SOP) EIASOP-VOAGCMS9 - VOAs in Soil High Level Method.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are applicable for the contaminants detected), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected
6) ' = Feet Below Ground Surface
7) Refer to Appendix C for all analytical results.

TABLE 4
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/L

SAMPLE LOCATION:	**MIP 17 (23-24')**	**MIP 30 (20-21')**	**SB-31 (17-17.5)**	**NHDES S-1, S-2, S-3 µg/Kg**
SAMPLE NUMBER:	**R01-120314JT-0040**	**R01-120314JT-0032**	**R01-120314JT-0054**	
LABORATORY NUMBER:	**AB28344**	**AB28342**	**AB28346**	
PARAMETER				
Sec-Butylbenzene	ND	ND	ND	130,000
Tetrachloroethylene	490	ND	89	2,000

NOTES:
1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I Standard Operating Procedure (SOP) EIASOP-VOAGCMS9 - VOAs in Soil High Level Method.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are applicable for the contaminants detected), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected
6) ' = Feet Below Ground Surface
7) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 3 (12-13')	MIP 3 (15-16')	MIP 3 (16-17')	MIP 3 (18-19')	MIP 3 (19-20')	MIP 3 (20-21')	MIP 4 (3-4')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER								
Tetrachloroethylene	385	10	**69,700**	**49,200**	**13,800**	**43,300**	1,330	2,000
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 4 (8-9')	MIP 4 (10-11')	MIP 4 (13-14') A	MIP 4 (13-14') B	MIP 4 (13-14') C	MIP 4 (13-14') D	MIP 4 (18-19')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER								
Tetrachloroethylene	1,630	**31,800**	501	95	271	ND	ND	2,000
Trichloroethylene	ND	ND	ND	55	ND	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 4 (23-24')	MIP 4 (27-28')	MIP 4 (30-31')	MIP 4 (34-35')	MIP 14 (10-15')	MIP 14 (15-19')	MIP 14 (19-24')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER								
Tetrachloroethylene	**3,990**	7	ND	ND	1,200	10	ND	2,000
Trichloroethylene	42	ND	ND	ND	13	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 16 (2-3')	MIP 16 (3-4')	MIP 16 (8-9')	MIP 16 (17-18')	MIP 16 (22-23')	MIP 16 (23-24')	MIP 16 (24-25')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER								
Tetrachloroethylene	1,480	110	1,600	52	**2,280**	600	700	2,000
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 16 (25-26')	MIP 16 (26-27')	MIP 16 (27-28')	MIP 16 (28-29')	MIP 16 (29-30')	MIP 16 (30-31')	MIP 16 (31-32')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER								
Tetrachloroethylene	1,090	980	844	**2,020**	920	**2,620**	1,730	2,000
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 16 (32-33')	MIP 16 (35-36')	MIP 16 (36-37')	MIP 16 (37-38')	MIP 16 (38-39')	MIP 16 (39-40')	MIP 16 (40-41')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER								
Tetrachloroethylene	**2,400**	**4,050**	**3,220**	**4,860**	**4,460**	**4,490**	**7,360**	2,000
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 16 (41-42')	MIP 16 (42-43')	MIP 16 (43-44')	MIP 16 (44-45')	MIP 16 (45-46')	MIP 17 (0-5')	MIP 17 (5-10')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER								
Tetrachloroethylene	**5,190**	**4,230**	1,930	**2,010**	**2,650**	ND	ND	2,000
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 17 (5-10')B	MIP 17 (10-15')	MIP 17 (15-20')	MIP 17 (20-25')	MIP 17 (25-30')	MIP 17 (30-35')	MIP 21 (0-5')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER								
Tetrachloroethylene	ND	36	520	858	610	475	ND	2,000
Trichloroethylene	ND	19	ND	ND	ND	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 21 (5-10')	MIP 21 (10-15')	MIP 24 (0-5')	MIP 24 (5-10')	MIP 24 (10-15')	MIP 24 (15-20')	MIP 24 (20-24.5')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER								
Tetrachloroethylene	ND	ND	ND	ND	ND	ND	ND	2,000
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP-30 (0-5')	MIP 30 (5-10')	MIP 30 (10-15')	MIP 30 (15-20')	MIP 30 (20-25')	MIP 31 (0-5')	MIP 31 (5-10')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER								
Tetrachloroethylene	7	ND	ND	ND	ND	ND	ND	2,000
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 5

SUMMARY OF VOLATILE ORGANIC COMPOUND
FIELD SCREENING RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 31 (10-15')	MIP 31 (15-17.5')	NHDES S-1, S-2, S-3 µg/Kg
PARAMETER			
Tetrachloroethylene	82	216	2,000
Trichloroethylene	ND	ND	800

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory using EPA Region I Standard Operating Procedure (SOP) for Head Space Screening for Volatile Organic Compounds in Aqueous and Soil Samples.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants of concern), May 2007.
4) Bolded and shaded results exceed NHDES Method 1 Soil Standards.
5) ND = Not Detected.
6) ' = Feet
7) Sample results are reported based on sample wet weight.
8) Refer to Appendix C for all analytical results.

TABLE 6

SUMMARY OF SEMIVOLATILE ORGANIC COMPOUND RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 14 (14-15')	MIP 30 (6-7')	MIP 30 (18-19')	MIP 17 (8-9')	SB-31 (2-3')	MIP 24 (12-13')	MIP 24 (8-9')	NHDES S-1	NHDES S-2	NHDES S-3
SAMPLE NUMBER:	R01-120314JT-0025	R01-120314JT-0029	R01-120314JT-0031	R01-120314JT-0036	R01-120314JT-0050	R01-120314JT-0057	R01-120314JT-0060			
LABORATORY NUMBER:	AB28339	AB28340	AB28341	AB28343	AB28345	AB28347	AB28348	µg/Kg	µg/Kg	µg/Kg
PARAMETER										
1-Methylnaphthalene	ND	ND	ND	ND	11,000	ND	ND	NL	NL	NL
2-Methylnaphthalene	ND	ND	ND	ND	9,000	ND	ND	96,000	100,000	100,000
Acetophenone	770	ND	ND	ND	ND	ND	ND	NL	NL	NL
Benzo(a)anthracene	ND	ND	ND	ND	**3,200**	ND	ND	1,000	4,000	52,000
Bis(2-ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND	ND	NL	NL	NL
Chrysene	ND	ND	ND	ND	6,200	ND	ND	120,000	360,000	2,200,000
Dimethyl phthalate	ND	ND	ND	ND	ND	ND	280	700	700	700
Fluoranthene	580	ND	ND	ND	ND	ND	ND	960,000	2,500,000	5,000,000
Naphthalene	ND	ND	ND	ND	ND	ND	440	5,000	5,000	5,000
Phenanthrene	370	ND	ND	ND	13,000	ND	ND	960,000	2,500,000	5,000,000
Pyrene	460	ND	ND	ND	7,900	ND	ND	720,000	2,500,000	5,000,000

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I Standard Operating Procedure (SOP) EIASOP-BNAS3 - BNAs in Soil Medium Level Method.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, and S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards, May 2007.
4) The bolded and shaded result [benzo(a)anthracene (3,200 µg/Kg) at location SB-31, collected at 2-3 feet] exceeds the NHDES Method 1 S-1 Soil Standard, applicable to potentially accessible soil (unpaved, between 2 and 15 feet), with high frequency and high intensity use and children present.
5) ND = Not Detected
6) NL = Not Listed
7) ' = Feet
8) Note that summary tables do not include analytes were not detected. Refer to Appendix C for all analytical results.

TABLE 6

SUMMARY OF SEMIVOLATILE ORGANIC COMPOUND RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in µg/Kg

SAMPLE LOCATION:	MIP 4 (3-4')	MIP 4 (23-24')	NHDES S-1	NHDES S-2	NHDES S-3
SAMPLE NUMBER:	R01-120314JT-0065	R01-120314JT-0075			
LABORATORY NUMBER:	AB28350	AB28354	µg/Kg	µg/Kg	µg/Kg
PARAMETER					
1-Methylnaphthalene	ND	ND	NL	NL	NL
2-Methylnaphthalene	ND	ND	96,000	100,000	100,000
Acetophenone	ND	ND	NL	NL	NL
Benzo(a)anthracene	ND	ND	1,000	4,000	52,000
Bis(2-ethylhexyl)phthalate	ND	470	NL	NL	NL
Chrysene	ND	ND	120,000	360,000	2,200,000
Dimethyl phthalate	ND	ND	700	700	700
Fluoranthene	ND	400	960,000	2,500,000	5,000,000
Naphthalene	ND	360	5,000	5,000	5,000
Phenanthrene	ND	250	960,000	2,500,000	5,000,000
Pyrene	ND	290	720,000	2,500,000	5,000,000

NOTES:

1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) using EPA Region I Standard Operating Procedure (SOP) EIASOP-BNAS3 - BNAs in Soil Medium Level Method.
2) All Results in Micrograms per Kilogram (µg/Kg).
3) NHDES S-1, S-2, and S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards, May 2007.
4) The bolded and shaded result [benzo(a)anthracene (3,200 µg/Kg) at location SB-31, collected at 2-3 feet] exceeds the NHDES Method 1 S-1 Soil Standard, applicable to potentially accessible soil (unpaved, between 2 and 15 feet), with high frequency and high intensity use and children present.
5) ND = Not Detected
6) NL = Not Listed
7) ' = Feet
8) Note that summary tables do not include analytes were not detected. Refer to Appendix C for all analytical results.

TABLE 7

SUMMARY OF TOTAL PETROLEUM HYDROCARBON (TPH)
PRELIMINARY RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
Results in mg/Kg

SAMPLE NUMBER:	SERA0173-001	SERA0173-002	SERA0173-003	SERA0173-004	SERA0173-005	SERA0173-006	SERA0173-007	NHDES S-1, S-2, S-3 mg/Kg
SAMPLE LOCATION:	MIP 3 (16-17')	MIP 3 (19-20')	MIP 4 (13-14')	MIP 14 (10-15')	MIP 17 (5-10')	MIP 21 (0-5')	MIP 21 (5-10')	
LABORATORY NUMBER:	JB3137-1	JB3137-2	JB3137-3	JB3137-4	JB3137-5	JB3137-6	JB3137-7	
PARAMETER								
TPH-GRO (C6-C10)	ND	54.3	837	311	ND	173	60.7	
TPH-DRO (C10-C28)	48.2	260	1,270	1,190	ND	3,860	373	10,000*
TPH-ORO (>C28-C40)	ND	33.1	ND	16.3	ND	146	ND	

SAMPLE NUMBER:	SERA0173-008	SERA0173-009	SERA0173-010	SERA0173-011	SERA0173-012			NHDES S-1, S-2, S-3 mg/Kg
SAMPLE LOCATION:	MIP 21 (5-10')A	MIP 24 (5-10')	MIP 24 (10-15')	MIP 30 (0-5')	SB-31 (0-5')			
LABORATORY NUMBER:	JB3137-8	JB3137-9	JB3137-10	JB3137-11	JB3137-12			
PARAMETER								
TPH-GRO (C6-C10)	ND	ND	ND	ND	ND			
TPH-DRO (C10-C28)	121	133	ND	338	469			10,000*
TPH-ORO (>C28-C40)	ND	21.4	ND	109	2,010			

NOTES:

1) Samples analyzed by Accutest Laboratories (Accutest) using EPA Method SW847 8015C.
2) All Results in Milligrams per Kilogram (mg/Kg).
3) NHDES S-1, S-2, S-3 = New Hampshire Department of Environmental Services Method 1 S-1, S-2, and S-3 Soil Standards (these standards are equivalent for the contaminants detected), May 2007.
4) * = NHDES Method 1 Soil Standards for Total Petroleum Hydrocarbons (TPH) are presented, as specific standards for Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Oil Range Organics (ORO) are not listed.
5) ND = Not Detected
6) ' = Feet
7) Refer to Appendix C for all analytical results.

TABLE 8

SUMMARY OF TOTAL ORGANIC CARBON (TOC) RESULTS
SOIL SAMPLES
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE

SAMPLE LOCATION:	MIP-3 (10-11')	MIP-4 (34-35')	MIP-14 (20-21')	MIP-16 (14-15')	MIP-17 (15-16')	MIP-24 (20-21')	MIP-30 (18-19')
SAMPLE NUMBER:	R01-040212JT-0001	R01-040212JT-0002	R01-040212JT-0003	R01-040212JT-0013	R01-040212JT-0004	R01-040212JT-0005	R01-040212JT-0006
LABORATORY NUMBER:	L1205983-01	L1205983-02	L1205983-03	L1205983-7	L1205983-04	L1205983-05	L1205983-06
PARAMETER							
Total Organic Carbon (Rep 1)	0.167	0.018	0.029	0.043	0.068	0.036	0.021
Total Organic Carbon (Rep 2)	0.162	0.017	0.023	0.047	0.064	0.036	0.019

NOTES:
1) All results are reported in %.
2) Samples were analyzed by Alpha Analytical Laboratories (Alpha).
3) Refer to Appendix C for all analytical results.

Appendix C

Laboratory Analytical Data

ProScience Analytical Services, Inc

John Burton
Weston Solutions, Inc.
3 Riverside Drive
Andover, MA 01810

March 15, 2012

Dear John Burton,

The enclosed analytical results have been obtained by using the EPA/600/R-93/116 method. The "Visual Estimate" quantitative method is generally used for determining the percentage of asbestos and other components of the sample. "The Point Counting" method may also be used upon client request or at the analyst discretion. The Point Count method is usually recommended when the sample contains less than 10% asbestos by Visual estimate. Asbestos content less than 1% is recorded on the report as TR (trace).

The Quality Control data related to the samples analyzed is available upon client's written request. ProScience Analytical Services Inc., assumes no responsibility for potential sample contamination that may have occurred during the sample collection process or erroneous data provided by the client.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

All Laboratory records are retained for at least three years unless otherwise directed in writing by the client. The actual samples are retained for a period of two months and written request is necessary in order to be retained for a longer period of time. All analytical results and records are considered strictly confidential and will not be released under any circumstances to anyone except the actual client. The analytical results included in this report apply only to the items tested.

If you have any questions please contact the Laboratory Manager or the Laboratory Director.

Sincerely,

Stefanie Bishop, Optical Asbestos Manager
Aimee Cormier, Laboratory Director

Enclosure: Version 2
LAB BATCH ID: B 80235 CLIENT PROJECT ID: TDD #: 11-09-0007 TASK #: 0752
Client Ref: DAS Case # 0838F
AIHA ID# 102754; CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; ME ID# LA-056; NVLAP Lab Code 200090-0; RI ID # AAL-093; VT ID# AL016876

22 Cummings Park • Woburn, Massachusetts • 01801 • Phone (781)935-3212 • Fax (781)932-4857

ProScience Analytical Services, Inc.

Client Name: Weston Solutions, Inc.
PO #: 0078834
Client Project #: TDD #: 11-09-0007 Task #: 0752
Client Reference: DAS Case # 0838F
Method: EPA/600/R-93/116

Batch: **B80235**
Date Sampled: 3/14/2012
Date Received: 3/14/2012
Date Analyzed: 3/15/2012
Date of Report: 3/15/2012

		Asbestos %						Non-Asbestos %						
Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
FSM-01	Black	0	0	0	0	0	0	0	0	TR	0	0	0	100

Description: Floor Mastic
Location: N/A
Comments:
Is asbestos present? No. Analyzed: Yes

		Asbestos %						Non-Asbestos %						
Sample ID	Color	CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
FSM-02	Black	0	0	0	0	0	0	0	0	TR	0	0	0	100

Description: Floor Mastic
Location: N/A
Comments:
Is asbestos present? No. Analyzed: Yes

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite
Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals

Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

* All results are in percentage.

Analyst: Stefanie Bishop

Client Name: Weston Solutions, Inc.
Client Project #: TDD #: 11-09-0007 Task #: 0752
Client Reference: DAS Case # 0838F

Batch: **80235**
Date Received: 3/14/2012
Date Due: 3/15/2012
Stop on first pos: Yes or No

Batch: 80235

Sample ID	Description	Analyst	Stereo Scope					Optical Properties					RI		Asbestos Percent						Non-Asbestos Percent						
			SSAPE	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	Parallel	Perpendicular	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
FSM-01	Floor Mastic																										
FSM-02	Floor Mastic																										

Analyzed By / Date: 3-15-12 **QC By / Date:** **Fax, Email, Verbal Results By / Date:** 3.15 **# of Samples:** 2

Comments:

SSAPE = Stereo Scope Asbestos Percentage Estimate Birefringence L= less than .010, M= .011-.029, H= greater than .03: Microscope Olympus BH-2, Serial # circle 1- 242277, 229027, 235000, 230663

B80235

24hr. TAT

USEPA

DateShipped: 3/14/2012

CHAIN OF CUSTODY RECORD

Henry's Dry Cleaners
Contact Name: John Burton
Contact Phone: 978-621-1214

No: 1-031412-154855-0001

Case #: W1403
Lab: ProScience
Lab Contact: Aimee Cormier

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container
	R01-120314JT-0001	FST-01	Asbestos TEM NOV	Floor Tile	3/14/2012	10:45	1	Bag
	R01-120314JT-0002	FSM-01	Asbestos ~~TEM NOV~~ PLM	Floor Mastic	3/14/2012	10:45	1	Bag
	R01-120314JT-0003	FST-02	Asbestos TEM NOV	Floor Tile	3/14/2012	10:50	1	Bag
	R01-120314JT-0004	FSM-02	Asbestos ~~TEM NOV~~ PLM	Floor Mastic	3/14/2012	10:50	1	Bag
	R01-120314JT-0005	FST-03	Asbestos TEM NOV	Floor Tile	3/14/2012	10:52	1	Bag

Special Instructions:	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
SAMPLE TRANSFER	[illegible]	3/14/12	Kathy Artone	3-14-12 @4:30pm							

Weston Solutions, Inc.
Northeast Division
3 Riverside Drive
Andover, Massachusetts 01810
978-552-2100 -- Fax 978-689-2794

B80235

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT EP-W-05-042

14 March 2012

Aimee Cormier
ProScience Analytical
22 Cummings Park
Woburn, MA 01801

SUBJECT: **Confirmation to Proceed with Analysis for DAS Case# 0838F**

TDD NO.: 11-09-0007 TASK NO.: 0752 P.O. NO.: 0078834

Dear Ms. Cormier:

This letter grants your firm confirmation to proceed with the analysis of samples for Weston Solutions, Inc. (WESTON®) on behalf of our client, the U.S. Environmental Protection Agency. All work will be performed within the terms presented in this letter and on the Request for Bid Forms. Method detection limits are those specified in the EPA test method(s) unless otherwise stated.

The date for our receipt of the Form results is 24 hours after sample receipt. One PDF and the hard copy of the complete analytical package is due 72 hours from sample receipt. The complete analytical package will be submitted on laboratory reporting forms and include Chain-of-Custody and sample receiving documentation and all associated bench sheets, QA and supporting raw data. Our samples are to be identified in your data package using the EPA number written under the remarks section on the chain-of-custody record. (We do not consider results via facsimile machines to be the complete data package.) For delays in the submission of the complete analytical package not due to an act of God, a cumulative reduction in the total charge will be three percent for the first day, two percent for the second day, and an additional one percent for each additional day. (Weekends and WESTON-observed holidays are included in the turnaround time, but are not counted in determining the late charges.)

The previously provided Federal Acquisition Regulation (FAR) clauses (START III) are to be applied and are binding pertaining to this agreement.

In regard to payment, WESTON's terms are net 45 days from the date of invoice or receipt of the analytical package, whichever is later. The invoice must be submitted directly to the START office, to the attention of Mr. Clifford Myers. If a late penalty must be invoked and your invoice does not include this penalty, a letter detailing the penalty will be written by WESTON for your information and our files which may result in delayed payment.

Unless otherwise specified, Saturdays, Sundays and the following holidays are not considered delivery days: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving, the day after Thanksgiving, the day before Christmas, and Christmas. The turnaround time (day 0) begins with the date and time of delivery of the sample(s) to your laboratory.

B80235

WESTON SOLUTIONS

SUBJECT: **Confirmation to Proceed with Analysis for DAS Case# 0838F**

LABORATORY NAME: ProScience Analytical P.O. No.: 0078834

WRITTEN APPROVAL FOR SUBCONTRACTING ANY PORTION OF THIS WORK BY YOUR FIRM MUST BE GRANTED BY THE REGIONAL LABORATORY COORDINATOR ON BEHALF OF WESTON PRIOR TO THE PERFORMANCE OF ANY WORK STATED IN THE AGREEMENT.

The laboratory is responsible for the disposal of samples. WESTON will not dispose of any samples.

If you have questions or require additional information about this project, please contact me or Bill Mahany at (978) 552-2100. Please have an authorized representative of your company sign the signature line below, indicating that your firm agrees to the terms set forth in this letter. This letter must be signed by a person empowered to bind the company. Please return a copy of the signed letter via facsimile at (978) 689-2794.

Sincerely,

WESTON SOLUTIONS, INC.

John C. Burton

John C. Burton
Lead Chemist

Authorized Laboratory Signature: Aimee L Cormier

Printed Name: Aimee L. Cormier

Position: Laboratory Director

Weston Solutions, Inc.
1400 Weston Way
P.O. Box 2653
West Chester, PA 19380 USA
610-701-3000 • Fax 610-701-4678
F.E.I.N. 23-1501990

Purchase Order: 0078834

B80235

Date Printed: 03/14/2012

Order To: PROSCIENCE ANALYTICAL SERVICES INC PRO06
22 CUMMINGS PARK
WOBURN, MA 01801

Ship To: WESTON SOLUTIONS, INC.
ATTN: Cliff Myers
Cliff.Myers@Westonsolutions.com
3 RIVERSIDE DRIVE
ANDOVER, MA 01810

Contact: Aimee Cormier Ph: 781-935-3212 Fax: 781-932-4857

ORDER DATE	BUYER	TERMS	FOB	SALES ORDER	SHIP VIA	DELIVER TO
03/14/12	Myers, Clifford L	NET 45	DESTINATION		Supplier	John Burton / Cliff Myers

LINE	ITEM/DESCRIPTION	REV	U/M	DUE DATE	DESIRED DATE	ORDER QUANTITY	NET UNIT COST	EXTENDED COST
	Period of Performance: 03/14/12 To 03/21/12 DAS Case # 0838F							
	Furnish the following subject to and in accordance with descriptions, instructions, prices and applicable documents noted on the face hereof, and Appendix L, General Provisions, Lab Services Agreement which is attached hereto and made a part hereof.							
	"Supplemental Provisions are attached hereto and form a part hereof."							
	LATE DELIVERY PENALTIES "In the event that Seller does not meet the contractual delivery date as included herein, a penalty will be assessed on each invoice submitted involving any such late delivery in the amount of three (3%) for the first day late, two (2%) percent for the second day late and one (1%)percent for every day thereafter (weekends and observed holidays of WESTON, not Included) until delivery and acceptance is completed by Seller".							
1	46600-000000 Laboratory Analytical Services Asbestos / TEM (NOB) Tile & Mastic		EA	03/14/12	03/14/12	5.0000	85.0000	$425.00
	Req: 0104236							
	Prime Contract #: EP-W-05-042 AOP: 47106-000 1.01.1584			20114.076.998.0752.00				
	Bill To: WESTON SOLUTIONS, INC. ATTN: Cliff Myers Cliff.Myers@Westonsolutions.com 3 RIVERSIDE DRIVE ANDOVER, MA 01810						PO Total Amt:	$425.00

Authorized Signature(s)

ACKNOWLEDGED BY SIGN AND RETURN: Aimee Cormier DATE: 3/14/12

02P-0900-1 6/1/02

ProScience Analytical Services, Inc

John Burton
Weston Solutions, Inc.
3 Riverside Drive
Andover, MA 01810

March 15, 2012

Dear John Burton,

Results of samples you described and submitted to ProScience Analytical Services, Inc. are shown on the enclosed data sheets. The analytical results in this report apply to the items tested only.
The listed samples were prepared and analyzed in compliance with the New York State Transmission Electron Microscope Method for Identifying and Quantitating Asbestos in Non-Friable Organically Bound Bulk Samples. This method is used for the determination of weight percent of asbestos in non-friable materials.
The sample is processed to remove non-asbestos interference. The remaining residue is examined using a Philips 300 transmission electron microscope equipped with selected area electron diffraction (SAED) and an Evex energy dispersive x-ray analyzer.

The following are reported: identification numbers, type of material, color or the sample, initial weight of the sample, weight percent of organic material lost by ashing, weight percent of carbonates lost by acid dissolution, weight percent of non-fibrous/non asbestos inorganic material, total weight percent of asbestos in the original sample, and the type(s) of asbestos, if any.
The EPA recognizes asbestos as the following: actinolite, amosite, anthophyllite, chrysotile, crocidolite, and tremolite. To be considered asbestos containing, a material must be determined to contain greater than one percent asbestos. Samples are retained for a period of 2 months.

The quality control data related to the samples analyzed are available for review upon the written request of the client. ProScience Analytical Services, Inc. and its personnel assume no responsibility for potential sample contamination, misuse, misinformation, or misrepresentation by the client. The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.
This report may not be reproduced, except in its entirety, without permission of the ProScience Analytical Services, Inc. Laboratory Director.

Please contact me if you have any questions regarding this report or related information.

Sincerely,

Mark Derosier, Senior Analyst
Aimee Cormier, Laboratory Manager
Adrian Stanca, Laboratory Director

Enclosure:

BATCH NUMBER : NT 13060 CLIENT PROJECT ID: W1403
Client Ref: Henry's Dry Cleaners
NVLAP Lab Code 200090-0; CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; ME ID# LA-056; AIHA ID# 102754; VT ID# AL016876; PH ID# 218(TEM,PLM); RI ID# 186.

ProScience Analytical Services, Inc.

22 Cummings Park, Woburn, Massachusetts 01801
781-935-3212 ~ Fax: 781-932-4857 ~ E-Mail general@proscience.net

Laboratory Report

Client Project #: W1403
Client Reference: Henry's Dry Cleaners
PO #: 0078834
Client #: 1731
Client Name: Weston Solutions, Inc.

Batch: **NT 13060**
Method: NOB
Date Received: 3/14/2012
Date Analyzed: 3/15/2012
Date of Report: 3/15/2012

LAB ID	Field ID	Description:	Color	Initial Weight	% Asbestos Types						% Other	%	%	Total %	Analyzed /	Preped /
					CHR	AMO	ACT	CRO	ANT	TRE	Non-asb.	Organic	Carb.	**Asbestos**	Charged	Charged
NT99006	R01-120314JT-0001	Floor Tile		.5465	18.59	.00	.00	.00	.00	.00	4.65	19.54	57.22	**18.59**	Yes	No
NT99008	R01-120314JT-0003	Floor Tile		.3846	17.04	.00	.00	.00	.00	.00	7.30	19.58	56.08	**17.04**	Yes	No
NT99010	R01-120314JT-0005	Floor Tile		.4157	19.55	.00	.00	.00	.00	.00	4.89	19.75	55.81	**19.55**	Yes	No

Comments:

Key: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite TR = Trace = < 1% ND = None Detected

Mark Derosier, Analyst

24hr. TAT

USEPA

DateShipped: 3/14/2012

CHAIN OF CUSTODY RECORD

Henry's Dry Cleaners
Contact Name: John Burton
Contact Phone: 978-621-1214

No: 1-031412-154855-0001

Case #: W1403
Lab: ProScience
Lab Contact: Aimee Cormier

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container
	R01-120314JT-0001	FST-01	Asbestos TEM NOV	Floor Tile	3/14/2012	10:45	1	Bag
	R01-120314JT-0002	FSM-01	Asbestos ~~TEM NOV~~ PLM	Floor Mastic	3/14/2012	10:45	1	Bag
	R01-120314JT-0003	FST-02	Asbestos TEM NOV	Floor Tile	3/14/2012	10:50	1	Bag
	R01-120314JT-0004	FSM-02	Asbestos ~~TEM NOV~~ PLM	Floor Mastic	3/14/2012	10:50	1	Bag
	R01-120314JT-0005	FST-03	Asbestos TEM NOV	Floor Tile	3/14/2012	10:52	1	Bag

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
SAMPLE TRANSFER	[illegible]	3/14/12	Kathy Artone	3-14-12	@4:30pm						

Weston Solutions, Inc.
Northeast Division
3 Riverside Drive
Andover, Massachusetts 01810
978-552-2100 -- Fax 978-689-2794

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT EP-W-05-042

14 March 2012

Aimee Cormier
ProScience Analytical
22 Cummings Park
Woburn, MA 01801

SUBJECT: **Confirmation to Proceed with Analysis for DAS Case# 0838F**

TDD NO.: 11-09-0007 TASK NO.: 0752 P.O. NO.: 0078834

Dear Ms. Cormier:

This letter grants your firm confirmation to proceed with the analysis of samples for Weston Solutions, Inc. (WESTON®) on behalf of our client, the U.S. Environmental Protection Agency. All work will be performed within the terms presented in this letter and on the Request for Bid Forms. Method detection limits are those specified in the EPA test method(s) unless otherwise stated.

The date for our receipt of the Form results is 24 hours after sample receipt. One PDF and the hard copy of the complete analytical package is due 72 hours from sample receipt. The complete analytical package will be submitted on laboratory reporting forms and include Chain-of-Custody and sample receiving documentation and all associated bench sheets, QA and supporting raw data. Our samples are to be identified in your data package using the EPA number written under the remarks section on the chain-of-custody record. (We do not consider results via facsimile machines to be the complete data package.) For delays in the submission of the complete analytical package not due to an act of God, a cumulative reduction in the total charge will be three percent for the first day, two percent for the second day, and an additional one percent for each additional day. (Weekends and WESTON-observed holidays are included in the turnaround time, but are not counted in determining the late charges.)

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In regard to payment, WESTON's terms are net 45 days from the date of invoice or receipt of the analytical package, whichever is later. The invoice must be submitted directly to the START office, to the attention of Mr. Clifford Myers. If a late penalty must be invoked and your invoice does not include this penalty, a letter detailing the penalty will be written by WESTON for your information and our files which may result in delayed payment.

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SUBJECT: **Confirmation to Proceed with Analysis for DAS Case# 0838F**

LABORATORY NAME: ProScience Analytical P.O. No.: 0078834

WRITTEN APPROVAL FOR SUBCONTRACTING ANY PORTION OF THIS WORK BY YOUR FIRM MUST BE GRANTED BY THE REGIONAL LABORATORY COORDINATOR ON BEHALF OF WESTON PRIOR TO THE PERFORMANCE OF ANY WORK STATED IN THE AGREEMENT.

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If you have questions or require additional information about this project, please contact me or Bill Mahany at (978) 552-2100. Please have an authorized representative of your company sign the signature line below, indicating that your firm agrees to the terms set forth in this letter. This letter must be signed by a person empowered to bind the company. Please return a copy of the signed letter via facsimile at (978) 689-2794.

Sincerely,

WESTON SOLUTIONS, INC.

John C. Burton

John C. Burton
Lead Chemist

Authorized Laboratory Signature: Aimee L Cormier

Printed Name: Aimee L. Cormier

Position: Laboratory Director

Weston Solutions, Inc.
1400 Weston Way
P.O. Box 2653
West Chester, PA 19380 USA
610-701-3000 • Fax 610-701-4678
F.E.I.N. 23-1501990

Purchase Order: 0078834

Date Printed: 03/14/2012

Order To: PROSCIENCE ANALYTICAL SERVICES INC PRO06
22 CUMMINGS PARK
WOBURN, MA 01801

Ship To: WESTON SOLUTIONS, INC.
ATTN: Cliff Myers
Cliff.Myers@Westonsolutions.com
3 RIVERSIDE DRIVE
ANDOVER, MA 01810

Contact: Aimee Cormier Ph: 781-935-3212 Fax: 781-932-4857

ORDER DATE	BUYER	TERMS	FOB	SALES ORDER	SHIP VIA	DELIVER TO
03/14/12	Myers, Clifford L	NET 45	DESTINATION		Supplier	John Burton / Cliff Myers

LINE	ITEM/DESCRIPTION	REV	U/M	DUE DATE	DESIRED DATE	ORDER QUANTITY	NET UNIT COST	EXTENDED COST
	Period of Performance: 03/14/12 To 03/21/12							
	DAS Case # 0838F							
	**********							
	Furnish the following subject to and in accordance with descriptions, instructions, prices and applicable documents noted on the face hereof, and Appendix L, General Provisions, Lab Services Agreement which is attached hereto and made a part hereof.							
	**********							
	"Supplemental Provisions are attached hereto and form a part hereof."							
	**********							
	LATE DELIVERY PENALTIES							
	"In the event that Seller does not meet the contractual delivery date as included herein, a penalty will be assessed on each invoice submitted involving any such late delivery in the amount of three (3%) for the first day late, two (2%) percent for the second day late and one (1%)percent for every day thereafter (weekends and observed holidays of WESTON, not Included) until delivery and acceptance is completed by Seller".							
	**********							
1	46600-000000 Laboratory Analytical Services Asbestos / TEM (NOB) Tile & Mastic		EA	03/14/12	03/14/12	5.0000	85.0000	$425.00
				Req: 0104236				
	Prime Contract #: EP-W-05-042 AOP: 47106-000 1.01.1584			20114.076.998.0752.00				
	Bill To: WESTON SOLUTIONS, INC. ATTN: Cliff Myers Cliff.Myers@Westonsolutions.com 3 RIVERSIDE DRIVE ANDOVER, MA 01810						PO Total Amt:	$425.00
	Authorized Signature(s)							

02P-0900-1 6/1/02

ACKNOWLEDGED BY SIGN AND RETURN: Aimee L Cormier

DATE: 3/14/12

ANALYTICAL REPORT

Lab Number:	L1205983
Client:	Geo Testing Express 125 Nagog Park Acton, MA 01720
ATTN:	Joe Tomei
Phone:	(978) 893-1241
Project Name:	HENRY DRY CLEANER
Project Number:	GTX-11673
Report Date:	04/17/12

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: HENRY DRY CLEANER
Project Number: GTX-11673

Lab Number: L1205983
Report Date: 04/17/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1205983-01	R01-040212JT-0001	Not Specified	03/29/12 00:00
L1205983-02	R01-040212JT-0002	Not Specified	03/29/12 00:00
L1205983-03	R01-040212JT-0003	Not Specified	03/29/12 00:00
L1205983-04	R01-040212JT-0004	Not Specified	03/28/12 00:00
L1205983-05	R01-040212JT-0005	Not Specified	03/28/12 00:00
L1205983-06	R01-040212JT-0006	Not Specified	03/27/12 00:00
L1205983-07	R01-040212JT-0013	Not Specified	03/30/12 00:00

Project Name: HENRY DRY CLEANER **Lab Number:** L1205983
Project Number: GTX-11673 **Report Date:** 04/17/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Peter Henriksen

Title: Technical Director/Representative Date: 04/17/12

INORGANICS
&
MISCELLANEOUS

Project Name: HENRY DRY CLEANER
Project Number: GTX-11673

Lab Number: L1205983
Report Date: 04/17/12

SAMPLE RESULTS

Lab ID: L1205983-01
Client ID: R01-040212JT-0001
Sample Location: Not Specified
Matrix: Soil

Date Collected: 03/29/12 00:00
Date Received: 04/05/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.167		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR
Total Organic Carbon (Rep2)	0.162		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR

Project Name: HENRY DRY CLEANER
Project Number: GTX-11673

Lab Number: L1205983
Report Date: 04/17/12

SAMPLE RESULTS

Lab ID: L1205983-02
Client ID: R01-040212JT-0002
Sample Location: Not Specified
Matrix: Soil

Date Collected: 03/29/12 00:00
Date Received: 04/05/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.018		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR
Total Organic Carbon (Rep2)	0.017		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR

Project Name: HENRY DRY CLEANER
Project Number: GTX-11673

Lab Number: L1205983
Report Date: 04/17/12

SAMPLE RESULTS

Lab ID: L1205983-03
Client ID: R01-040212JT-0003
Sample Location: Not Specified
Matrix: Soil

Date Collected: 03/29/12 00:00
Date Received: 04/05/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.029		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR
Total Organic Carbon (Rep2)	0.023		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR

Project Name: HENRY DRY CLEANER
Project Number: GTX-11673

Lab Number: L1205983
Report Date: 04/17/12

SAMPLE RESULTS

Lab ID: L1205983-04
Client ID: R01-040212JT-0004
Sample Location: Not Specified
Matrix: Soil

Date Collected: 03/28/12 00:00
Date Received: 04/05/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.068		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR
Total Organic Carbon (Rep2)	0.064		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR

Project Name: HENRY DRY CLEANER
Project Number: GTX-11673

Lab Number: L1205983
Report Date: 04/17/12

SAMPLE RESULTS

Lab ID: L1205983-05
Client ID: R01-040212JT-0005
Sample Location: Not Specified
Matrix: Soil

Date Collected: 03/28/12 00:00
Date Received: 04/05/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.036		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR
Total Organic Carbon (Rep2)	0.036		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR

Project Name: HENRY DRY CLEANER
Project Number: GTX-11673

Lab Number: L1205983
Report Date: 04/17/12

SAMPLE RESULTS

Lab ID: L1205983-06
Client ID: R01-040212JT-0006
Sample Location: Not Specified
Matrix: Soil

Date Collected: 03/27/12 00:00
Date Received: 04/05/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.021		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR
Total Organic Carbon (Rep2)	0.019		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR

Project Name: HENRY DRY CLEANER
Project Number: GTX-11673

Lab Number: L1205983
Report Date: 04/17/12

SAMPLE RESULTS

Lab ID: L1205983-07
Client ID: R01-040212JT-0013
Sample Location: Not Specified
Matrix: Soil

Date Collected: 03/30/12 00:00
Date Received: 04/05/12
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.043		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR
Total Organic Carbon (Rep2)	0.047		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR

Project Name: HENRY DRY CLEANER **Lab Number:** L1205983

Project Number: GTX-11673 **Report Date:** 04/17/12

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-07 Batch: WG527907-1										
Total Organic Carbon (Rep1)	ND		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR
Total Organic Carbon (Rep2)	ND		%	0.010	--	1	-	04/17/12 04:00	1,9060	NR

Project Name: HENRY DRY CLEANER **Lab Number:** L1205983

Project Number: GTX-11673 **Report Date:** 04/17/12

S.R.M. Standard Quality Control

Standard Reference Material (SRM): WG527907-2

Parameter	% Recovery	Qual	QC Criteria
Total Organic Carbon (Rep1)	115		75-125
Total Organic Carbon (Rep2)	94		75-125

Project Name: HENRY DRY CLEANER
Project Number: GTX-11673

Lab Number: L1205983
Report Date: 04/17/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1205983-01A	Glass 100ml unpreserved	A	N/A	3.1	Y	Absent	A2-TOC-9060-2REPS(28)
L1205983-02A	Glass 100ml unpreserved	A	N/A	3.1	Y	Absent	A2-TOC-9060-2REPS(28)
L1205983-03A	Glass 100ml unpreserved	A	N/A	3.1	Y	Absent	A2-TOC-9060-2REPS(28)
L1205983-04A	Glass 100ml unpreserved	A	N/A	3.1	Y	Absent	A2-TOC-9060-2REPS(28)
L1205983-05A	Glass 100ml unpreserved	A	N/A	3.1	Y	Absent	A2-TOC-9060-2REPS(28)
L1205983-06A	Glass 100ml unpreserved	A	N/A	3.1	Y	Absent	A2-TOC-9060-2REPS(28)
L1205983-07A	Glass 100ml unpreserved	A	N/A	3.1	Y	Absent	A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name:	HENRY DRY CLEANER	**Lab Number:**	L1205983
Project Number:	GTX-11673	**Report Date:**	04/17/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report

Project Name:	HENRY DRY CLEANER	**Lab Number:**	L1205983
Project Number:	GTX-11673	**Report Date:**	04/17/12

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	HENRY DRY CLEANER	**Lab Number:**	L1205983
Project Number:	GTX-11673	**Report Date:**	04/17/12

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised January 30, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable), Total Cyanide. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Organic Carbon, Total Cyanide, Corrosivity, TCLP 1311. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570B, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: EPA 245.7, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8260B, 8270C, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 3060A, 6020A, 7471A, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 5035, 8260B, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3010, 3020A, SM2320B, SM2540D, 2540G, EPA 180.1, 1631E, SW-846 7470A, 9040B, 6020, 9050A. Organic Parameters: SW-846 3510C, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8015B 8081A, 8082, 8260B, 8270C)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6020, 1311, 1312, 3050B, 3051, 3060A, 7196A, 7470A, 7471A, 7474, 9040B, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 5030B, 5035L, 5035H, 3630C, 3640A, 3660B, 3665A, 8081A, 8082, 8260B, 8270C, 8015B.)

Atmospheric Organic Parameters (EPA TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020 Organic Parameters: SW-846 8270C, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, EPA 200.8, 6020, 1631E, 245.1, 245.7, 7470A, 9014, 9040B, 9050, 120.1, 4500CN-E, 4500H-B, EPA 376.2, 180.1, 3020A. Organic Parameters: EPA 8260B, 8270C, 8081A, 8082, 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020, 7196A, 3060A, 7471A, 7474, 9014, 9040B, 9045C, 9010B. Organic Parameters: EPA 8260B, 8270C, 8081A, DRO 8015B, 8082, 1311, 1312, 3050B, 3580, 3570, 3051, 5035, 5030B.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 ***NELAP Accredited***

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A,7471B, 7474. Organic Parameters: EPA3050B, 3540C, 3630C, 8270C, 8081B, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. ***NELAP Accredited via LA-DEQ.***

Refer to LA-DEQ Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. ***NELAP Accredited.***

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8260, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. ***NELAP Accredited.***

Non-Potable Water (Inorganic Parameters:EPA 3020A,6020A,245.7,9040B,SM4500H-B. Organic Parameters: EPA 3510C,3640A,3660B,3665A,8270C,8270D,8082A,8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 5030B, 8260B, 8270C, 8270C-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 5035A, 8260B, 8270C, 8270-ALK-PAH, 8082, 8081A, 8015D-SHC, 8015D.

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C:** Biphenyl. **TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

Serial_No.04171217.01

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193

MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1205983

Client Information

Client: Geotesting Express

Address: 125 Nagog Park Acton, MA 01720

Phone: 978-635-0424

Fax: 978 635 0266

Email: jdt@geotesting.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Henry Dry Cleaner

Project Location: —

Project #: GTX-11673

Project Manager: D. Edgerton

ALPHA Quote #: —

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria
—	—

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☒ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

n/A

ANALYSIS: TOC Method (SW846 9060A)

SAMPLE HANDLING

Filtration ☐ Done ☐ Not needed ☐ Lab to do

Preservation ☐ Lab to do (Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOC Method (SW846 9060A)	Sample Specific Comments	Total # Bottles
L1205983-1	R01-040212JT-0001	3/29/12	—	soil	—	1		1
2	" -0002	"	—	"	—	1		1
3	" -0003	"	—	"	—	1		1
4	" -0004	3/28/12	—	"	—	1		1
5	" -0005	"	—	"	—	1		1
6	" -0006	3/27/12	—	"	—	1		1
7	" -0013	3/30/12	—	"	—	1		1

RM 4/5/12

RM 4/5/12

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Container Type: Jar

Preservative: 4C

Relinquished By:	Date/Time	Received By:	Date/Time
Ron V. M	2:08pm 4/5/12		4/5/12
	4/5/12		4/6/12 8:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 14-OCT-07)

Lockheed Martin
Scientific Engineering Response and Analytical Services
2890 Woodbridge Avenue Building 209
Edison, NJ 08837-3679
Telephone 732-321-4200 Facsimile 732-494-4021

LOCKHEED MARTIN

DATE: 04/17/2012

TO: R. Singhvi, ERTC/EPA

FROM: Vinod Kansal, Analytical Support Chemist for VK

SUBJECT: Preliminary Results of Project Henry's Dry Cleaners WA# 0173.

Attached please find the preliminary results of the above referenced project for the following samples.

Chain of Custody No.	Analyses
SERA0173-04/02/12-0001	12 soil samples for GRO, DRO, ORO

cc: Archives
Subcontracting
G. Depasquale
V. Kansal
D. Killeen
WAM: T. Johnson
Task Leader: D. Edgerton

Sample Summary

Lockheed Martin

SERA0173

Job No: JB3137

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
JB3137-1	03/29/12	16:35	04/02/12	SO	Soil	MIP3-(16-17)
JB3137-2	03/29/12	18:15	04/02/12	SO	Soil	MIP3-(19-20)
JB3137-3	03/29/12	11:25	04/02/12	SO	Soil	MIP4-(13-14)
JB3137-4	03/29/12	09:25	04/02/12	SO	Soil	MIP-14-(10-15)
JB3137-5	03/28/12	09:00	04/02/12	SO	Soil	MIP-17-(5-10)
JB3137-6	03/28/12	12:45	04/02/12	SO	Soil	MIP21-(0-5)
JB3137-7	03/28/12	13:00	04/02/12	SO	Soil	MIP21-(5-10)
JB3137-8	03/28/12	13:10	04/02/12	SO	Soil	MIP21-(5-10A)
JB3137-9	03/28/12	16:05	04/02/12	SO	Soil	MIP24-(5-10)
JB3137-10	03/28/12	16:30	04/02/12	SO	Soil	MIP24-(10-15)
JB3137-11	03/27/12	09:00	04/02/12	SO	Soil	MIP30-(0-5)
JB3137-12	03/28/12	14:45	04/02/12	SO	Soil	SB31-(0-5)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Report of Analysis

Client Sample ID:	MIP3-(16-17)		
Lab Sample ID:	JB3137-1	Date Sampled:	03/29/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	82.5
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96865.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.6 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	15	2.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	90%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP3-(16-17)		
Lab Sample ID:	JB3137-1	Date Sampled:	03/29/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	82.5
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2159.D	1	04/06/12	CS	04/04/12	OP56028	G5Y68
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	48.2	12	0.38	mg/kg	
	TPH-ORO (>C28-C40)	ND	12		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	97%		13-142%
16416-32-3	Tetracosane-d50	82%		12-141%
438-22-2	5a-Androstane	107%		13-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP3-(19-20)		
Lab Sample ID:	JB3137-2	Date Sampled:	03/29/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	88.0
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96866.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.6 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	54.3	12	2.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	101%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP3-(19-20)		
Lab Sample ID:	JB3137-2	Date Sampled:	03/29/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	88.0
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2160.D	1	04/06/12	CS	04/04/12	OP56028	G5Y68
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	260	11	0.36	mg/kg	
	TPH-ORO (> C28-C40)	33.1	11		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		13-142%
16416-32-3	Tetracosane-d50	78%		12-141%
438-22-2	5a-Androstane	105%		13-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP4-(13-14)		
Lab Sample ID:	JB3137-3	Date Sampled:	03/29/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	87.0
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96881.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.8 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	837	13	2.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	102%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP4-(13-14)		
Lab Sample ID:	JB3137-3	Date Sampled:	03/29/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	87.0
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2161.D	1	04/06/12	CS	04/04/12	OP56028	G5Y68
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1270	11	0.37	mg/kg	
	TPH-ORO (> C28-C40)	ND	11		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	97%		13-142%
16416-32-3	Tetracosane-d50	71%		12-141%
438-22-2	5a-Androstane	102%		13-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP-14-(10-15)		
Lab Sample ID:	JB3137-4	Date Sampled:	03/29/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	83.7
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96870.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.8 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	311	14	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	99%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP-14-(10-15)		
Lab Sample ID:	JB3137-4	Date Sampled:	03/29/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	83.7
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2162.D	1	04/06/12	CS	04/04/12	OP56028	G5Y68
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1190	12	0.37	mg/kg	
	TPH-ORO (> C28-C40)	16.3	12		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	108%		13-142%
16416-32-3	Tetracosane-d50	75%		12-141%
438-22-2	5a-Androstane	119%		13-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP-17-(5-10)		
Lab Sample ID:	JB3137-5	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	83.0
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96867.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.5 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	14	2.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	90%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP-17-(5-10)		
Lab Sample ID:	JB3137-5	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	83.0
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2163.D	1	04/06/12	CS	04/04/12	OP56028	G5Y68
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	12	0.38	mg/kg	
	TPH-ORO (> C28-C40)	ND	12		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	97%		13-142%
16416-32-3	Tetracosane-d50	84%		12-141%
438-22-2	5a-Androstane	108%		13-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP21-(0-5)		
Lab Sample ID:	JB3137-6	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	86.6
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96883.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.8 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	173	12	2.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	99%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP21-(0-5)		
Lab Sample ID:	JB3137-6	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	86.6
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2166.D	1	04/06/12	CS	04/04/12	OP56028	G5Y68
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	3860	11	0.36	mg/kg	
	TPH-ORO (> C28-C40)	146	11		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	193% [a]		13-142%
16416-32-3	Tetracosane-d50	85%		12-141%
438-22-2	5a-Androstane	102%		13-142%

(a) Outside control limits due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP21-(5-10)		
Lab Sample ID:	JB3137-7	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	78.4
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96868.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.3 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	60.7	15	2.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	103%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP21-(5-10)		
Lab Sample ID:	JB3137-7	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	78.4
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2135.D	1	04/06/12	CS	04/04/12	OP56028	G5Y67
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	373	12	0.40	mg/kg	
	TPH-ORO (>C28-C40)	ND	12		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		13-142%
16416-32-3	Tetracosane-d50	76%		12-141%
438-22-2	5a-Androstane	117%		13-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP21-(5-10A)		
Lab Sample ID:	JB3137-8	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	85.0
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96869.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.6 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	13	2.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	98%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP21-(5-10A)		
Lab Sample ID:	JB3137-8	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	85.0
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2136.D	1	04/06/12	CS	04/04/12	OP56028	G5Y67
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	121	12	0.37	mg/kg	
	TPH-ORO (>C28-C40)	ND	12		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		13-142%
16416-32-3	Tetracosane-d50	79%		12-141%
438-22-2	5a-Androstane	106%		13-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP24-(5-10)		
Lab Sample ID:	JB3137-9	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	84.0
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96875.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.7 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	14	2.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	92%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP24-(5-10)		
Lab Sample ID:	JB3137-9	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	84.0
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2137.D	1	04/06/12	CS	04/04/12	OP56028	G5Y67
Run #2							

	Initial Weight	Final Volume
Run #1	10.7 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	133	11	0.36	mg/kg	
	TPH-ORO (> C28-C40)	21.4	11		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		13-142%
16416-32-3	Tetracosane-d50	406% a		12-141%
438-22-2	5a-Androstane	135%		13-142%

(a) Outside control limits due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP24-(10-15)		
Lab Sample ID:	JB3137-10	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	86.3
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96876.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.8 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	13	2.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	91%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP24-(10-15)		
Lab Sample ID:	JB3137-10	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	86.3
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2138.D	1	04/06/12	CS	04/04/12	OP56028	G5Y67
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	11	0.37	mg/kg	
	TPH-ORO (>C28-C40)	ND	11		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		13-142%
16416-32-3	Tetracosane-d50	78%		12-141%
438-22-2	5a-Androstane	99%		13-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP30-(0-5)		
Lab Sample ID:	JB3137-11	Date Sampled:	03/27/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	90.9
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96877.D	1	04/09/12	DJ	n/a	n/a	GPF2704
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.9 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	12	2.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	92%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MIP30-(0-5)		
Lab Sample ID:	JB3137-11	Date Sampled:	03/27/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	90.9
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2139.D	1	04/06/12	CS	04/04/12	OP56028	G5Y67
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	338	11	0.35	mg/kg	
	TPH-ORO (>C28-C40)	109	11		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	84%		13-142%
16416-32-3	Tetracosane-d50	80%		12-141%
438-22-2	5a-Androstane	104%		13-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB31-(0-5)		
Lab Sample ID:	JB3137-12	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C	Percent Solids:	90.8
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PF96936.D	1	04/11/12	DJ	n/a	n/a	GPF2706
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.9 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	11	2.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
98-08-8	aaa-Trifluorotoluene	92%		66-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB31-(0-5)		
Lab Sample ID:	JB3137-12	Date Sampled:	03/28/12
Matrix:	SO - Soil	Date Received:	04/02/12
Method:	SW846 8015C SW846 3545A	Percent Solids:	90.8
Project:	SERA0173		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5Y2140.D	1	04/06/12	CS	04/04/12	OP56028	G5Y67
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	469	11	0.34	mg/kg	
	TPH-ORO (> C28-C40)	2010	11		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		13-142%
16416-32-3	Tetracosane-d50	78%		12-141%
438-22-2	5a-Androstane	93%		13-142%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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JB3137 PN

Lockheed Martin SERAS
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CHAIN OF CUSTODY RECORD
Site #: SERA0173
David Edgerton
(609) 529-3725

No: SERA0173-04/02/12-0001

ACCUTEST
(732) 329-0200

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	MS/MSD
-1	SERA0173-0001	MIP3-(16-17)	TPH (GRO, DRO, ORO)	Soil	3/29/2012 1635 (CAP)	1	8oz Amber	4 C	
-2	SERA0173-0002	MIP3- (19-20)	TPH (GRO, DRO, ORO)	Soil	3/29/2012 1515	1	8oz Amber	4 C	
-3	SERA0173-0003	MIP4-(13-14)	TPH (GRO, DRO, ORO)	Soil	3/29/2012 1125	1	8oz Amber	4 C	
-4	SERA0173-0004	MIP-14-(10-15)	TPH (GRO, DRO, ORO)	Soil	3/29/2012 0925	1	8oz Amber	4 C	
-5	SERA0173-0005	MIP-17-(5-10)	TPH (GRO, DRO, ORO)	Soil	3/28/2012 0900	1	8oz Amber	4 C	
-6	SERA0173-0006	MIP21-(0-5)	TPH (GRO, DRO, ORO)	Soil	3/28/2012 1245	1	8oz Amber	4 C	
-7	SERA0173-0007	MIP21-(5-10)	TPH (GRO, DRO, ORO)	Soil	3/28/2012 1400	1	8oz Amber	4 C	
-8	SERA0173-0008	MIP21-(5-10A)	TPH (GRO, DRO, ORO)	Soil	3/28/2012 1310	1	8oz Amber	4 C	
-9	SERA0173-0009	MIP24-(5-10)	TPH (GRO, DRO, ORO)	Soil	3/28/2012 1605	1	8oz Amber	4 C	
-10	SERA0173-0010	MIP24-(10-15)	TPH (GRO, DRO, ORO)	Soil	3/28/2012 1610	1	8oz Amber	4 C	
-11	SERA0173-0011	MIP30-(0-5)	TPH (GRO, DRO, ORO)	Soil	3/27/2012 0900	1	8oz Amber	4 C	
-12	SERA0173-0012	SB31-(0-5)	TPH (GRO, DRO, ORO)	Soil	3/28/2012 1445	1	8oz Amber	4 C	
					*				
									DSV2

Special Instructions: *added in SM 4/2/12

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
12/Analysis	[signature]	4/2/12	[signature]	4/2/12	1630						

46°C IR

1A

A1

JB3137: Chain of Custody
Page 1 of 3

Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

April 05, 2012

Janis Tsang - mail Code OSRR02-2
US EPA New England R1

Project Number: 12030029
Project: Henry's Dry Cleaners - Laconia, NH
Analysis: BNAs in Soils Medium Level
Analyst: Bhavita Patel

B. P. 4/5/2012

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-BNAS3.

Samples were prepared using pressurized fluid extraction. The samples were analyzed using high resolution capillary column chromatography and quadrapole mass spectrometry (GC/MS). The SOP for this analysis is based on US EPA SW-846 methods 3545A and 8270C and EIASOP-BNAGCMS7.

Date Samples Received by the Laboratory: 03/30/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Daniel N. Boudreau
Chemistry Team Leader

Qualifiers:

RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
NC = Not calculated since analyte concentration is ND.
J = Estimated value
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 5 times the concentration in the blank.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Soils Medium Level

Client Sample ID:	R01-120314JT-0025	Lab Sample ID:	AB28339
Date of Collection:	3/29/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/2/12	Percent Solids:	88%
Dry Weight Extracted:	10.231 grams	Extract Dilution:	1
Wet Weight Extracted:	11.620 grams	pH:	N/A
Final Volume:	1 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	240	
120-82-1	1,2,4-Trichlorobenzene	ND	240	
95-50-1	1,2-Dichlorobenzene	ND	240	
541-73-1	1,3-Dichlorobenzene	ND	240	
99-65-0	1,3-Dinitrobenzene	ND	240	
106-46-7	1,4-Dichlorobenzene	ND	240	
130-15-4	1,4-Naphthoquinone	ND	240	
90-12-0	1-Methylnaphthalene	ND	240	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	240	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	240	
95-95-4	2,4,5-Trichlorophenol	ND	240	
88-06-2	2,4,6-Trichlorophenol	ND	240	
120-83-2	2,4-Dichlorophenol	ND	240	
51-28-5	2,4-Dinitrophenol	ND	980	
121-14-2	2,4-Dinitrotoluene	ND	240	
105-67-9	2,4-dimethylphenol	ND	240	
87-65-0	2,6-Dichlorophenol	ND	240	
606-20-2	2,6-Dinitrotoluene	ND	240	
91-58-7	2-Chloronaphthalene	ND	240	
95-57-8	2-Chlorophenol	ND	240	
91-57-6	2-Methylnaphthalene	ND	240	
95-48-7	2-Methylphenol	ND	240	
88-74-4	2-Nitroaniline	ND	240	
88-75-5	2-Nitrophenol	ND	240	
108-39-4/106-44-.	3&4-Methylphenol	ND	490	
91-94-1	3,3'-Dichlorobenzidine	ND	240	
56-49-5	3-Methylcholanthrene	ND	240	
99-09-2	3-Nitroaniline	ND	240	
534-52-1	4,6-Dinitro-2-methylphenol	ND	490	
101-55-3	4-Bromophenyl-phenylether	ND	240	
59-50-7	4-Chloro-3-methylphenol	ND	240	
106-47-8	4-Chloroaniline	ND	240	
7005-72-3	4-Chlorophenyl-phenylether	ND	240	
100-01-6	4-Nitroaniline	ND	240	
100-02-7	4-Nitrophenol	ND	240	
56-57-5	4-nitroquinoline-1-oxide	ND	240	
83-32-9	Acenaphthene	ND	240	
208-96-8	Acenaphthylene	ND	240	
98-86-2	Acetophenone	770	240	
62-53-3	Aniline	ND	240	
120-12-7	Anthracene	ND	240	

140-57-8	Aramite	ND	490
103-33-3	Azobenzene	ND	240
92-87-5	Benzidine	ND	240
56-55-3	Benzo(a)anthracene	ND	240
50-32-8	Benzo(a)pyrene	ND	240
205-99-2	Benzo(b)fluoranthene	ND	240
191-24-2	Benzo(g,h,i)perylene	ND	240
207-08-9	Benzo(k)fluoranthene	ND	240
65-85-0	Benzoic acid	ND	490
100-51-6	Benzyl alcohol	ND	240
111-44-4	Bis(2-Chloroethyl)ether	ND	240
117-81-7	Bis(2-ethylhexyl)phthalate	ND	240
85-68-7	Butylbenzylphthalate	ND	240
86-74-8	Carbazole	ND	240
510-15-6	Chlorobenzilate	ND	240
218-01-9	Chrysene	ND	240
84-74-2	Di-n-butylphthalate	ND	240
117-84-0	Di-n-octyl phthalate	ND	240
53-70-3	Dibenz(a,h)anthracene	ND	240
132-64-9	Dibenzofuran	ND	240
84-66-2	Diethylphthalate	ND	240
131-11-3	Dimethyl phthalate	ND	240
88-85-7	Dinoseb	ND	490
62-50-0	Ethyl methanesulfonate	ND	240
206-44-0	Fluoranthene	**580**	240
86-73-7	Fluorene	ND	240
118-74-1	Hexachlorobenzene	ND	240
87-68-3	Hexachlorobutadiene	ND	240
77-47-4	Hexachlorocyclopentadiene	ND	240
67-72-1	Hexachloroethane	ND	240
1888-71-7	Hexachloropropene	ND	240
193-39-5	Indeno(1,2,3-cd)pyrene	ND	240
465-73-6	Isodrin	ND	240
78-59-1	Isophorone	ND	240
120-58-1	Isosafrole	ND	240
143-50-0	Kepone	ND	240
66-27-3	Methyl methanesulfonate	ND	240
86-30-6	N-Nitrosodiphenylamine	ND	240
621-64-7	N-nitroso-di-n-propylamine	ND	240
62-75-9	N-nitrosodimethylamine	ND	240
91-20-3	Naphthalene	ND	240
98-95-3	Nitrobenzene	ND	240
608-93-5	Pentachlorobenzene	ND	240
82-68-8	Pentachloronitrobenzene	ND	240
87-86-5	Pentachlorophenol	ND	980
62-44-2	Phenacetin	ND	240
85-01-8	Phenanthrene	**370**	240
108-95-2	Phenol	ND	240
129-00-0	Pyrene	**460**	240
110-86-1	Pyridine	ND	240
94-59-7	Safrole	ND	240
111-91-1	bis(-2-Chloroethoxy)methane	ND	240

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	43	22 - 97
Phenol-d6 (SS2)	43	23 - 99
Nitrobenzene-d5 (SS3)	65	20 - 98
2-Fluorobiphenyl (SS4)	65	23 - 104
2,4,6-Tribromophenol (SS5)	45	12 - 127
p-Terphenyl-d14 (SS6)	60	23 - 120

Comments: The following compounds did not meet the initial calibration criterion of %RSD<20 so they are quantitated using a first order linear regression, the RL for these compounds is 5.0 ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0 ppb.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Soils Medium Level

Client Sample ID:	R01-120314JT-0029	Lab Sample ID:	AB28340
Date of Collection:	3/27/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/2/12	Percent Solids:	87%
Dry Weight Extracted:	9.758 grams	Extract Dilution:	1
Wet Weight Extracted:	11.231 grams	pH:	N/A
Final Volume:	1 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	260	
120-82-1	1,2,4-Trichlorobenzene	ND	260	
95-50-1	1,2-Dichlorobenzene	ND	260	
541-73-1	1,3-Dichlorobenzene	ND	260	
99-65-0	1,3-Dinitrobenzene	ND	260	
106-46-7	1,4-Dichlorobenzene	ND	260	
130-15-4	1,4-Naphthoquinone	ND	260	
90-12-0	1-Methylnaphthalene	ND	260	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	260	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	260	
95-95-4	2,4,5-Trichlorophenol	ND	260	
88-06-2	2,4,6-Trichlorophenol	ND	260	
120-83-2	2,4-Dichlorophenol	ND	260	
51-28-5	2,4-Dinitrophenol	ND	1000	
121-14-2	2,4-Dinitrotoluene	ND	260	
105-67-9	2,4-dimethylphenol	ND	260	
87-65-0	2,6-Dichlorophenol	ND	260	
606-20-2	2,6-Dinitrotoluene	ND	260	
91-58-7	2-Chloronaphthalene	ND	260	
95-57-8	2-Chlorophenol	ND	260	
91-57-6	2-Methylnaphthalene	ND	260	
95-48-7	2-Methylphenol	ND	260	
88-74-4	2-Nitroaniline	ND	260	
88-75-5	2-Nitrophenol	ND	260	
108-39-4/106-44-.	3&4-Methylphenol	ND	510	
91-94-1	3,3'-Dichlorobenzidine	ND	260	
56-49-5	3-Methylcholanthrene	ND	260	
99-09-2	3-Nitroaniline	ND	260	
534-52-1	4,6-Dinitro-2-methylphenol	ND	510	
101-55-3	4-Bromophenyl-phenylether	ND	260	
59-50-7	4-Chloro-3-methylphenol	ND	260	
106-47-8	4-Chloroaniline	ND	260	
7005-72-3	4-Chlorophenyl-phenylether	ND	260	
100-01-6	4-Nitroaniline	ND	260	
100-02-7	4-Nitrophenol	ND	260	
56-57-5	4-nitroquinoline-1-oxide	ND	260	
83-32-9	Acenaphthene	ND	260	
208-96-8	Acenaphthylene	ND	260	
98-86-2	Acetophenone	ND	260	
62-53-3	Aniline	ND	260	
120-12-7	Anthracene	ND	260	

140-57-8	Aramite	ND	510
103-33-3	Azobenzene	ND	260
92-87-5	Benzidine	ND	260
56-55-3	Benzo(a)anthracene	ND	260
50-32-8	Benzo(a)pyrene	ND	260
205-99-2	Benzo(b)fluoranthene	ND	260
191-24-2	Benzo(g,h,i)perylene	ND	260
207-08-9	Benzo(k)fluoranthene	ND	260
65-85-0	Benzoic acid	ND	510
100-51-6	Benzyl alcohol	ND	260
111-44-4	Bis(2-Chloroethyl)ether	ND	260
117-81-7	Bis(2-ethylhexyl)phthalate	ND	260
85-68-7	Butylbenzylphthalate	ND	260
86-74-8	Carbazole	ND	260
510-15-6	Chlorobenzilate	ND	260
218-01-9	Chrysene	ND	260
84-74-2	Di-n-butylphthalate	ND	260
117-84-0	Di-n-octyl phthalate	ND	260
53-70-3	Dibenz(a,h)anthracene	ND	260
132-64-9	Dibenzofuran	ND	260
84-66-2	Diethylphthalate	ND	260
131-11-3	Dimethyl phthalate	ND	260
88-85-7	Dinoseb	ND	510
62-50-0	Ethyl methanesulfonate	ND	260
206-44-0	Fluoranthene	ND	260
86-73-7	Fluorene	ND	260
118-74-1	Hexachlorobenzene	ND	260
87-68-3	Hexachlorobutadiene	ND	260
77-47-4	Hexachlorocyclopentadiene	ND	260
67-72-1	Hexachloroethane	ND	260
1888-71-7	Hexachloropropene	ND	260
193-39-5	Indeno(1,2,3-cd)pyrene	ND	260
465-73-6	Isodrin	ND	260
78-59-1	Isophorone	ND	260
120-58-1	Isosafrole	ND	260
143-50-0	Kepone	ND	260
66-27-3	Methyl methanesulfonate	ND	260
86-30-6	N-Nitrosodiphenylamine	ND	260
621-64-7	N-nitroso-di-n-propylamine	ND	260
62-75-9	N-nitrosodimethylamine	ND	260
91-20-3	Naphthalene	ND	260
98-95-3	Nitrobenzene	ND	260
608-93-5	Pentachlorobenzene	ND	260
82-68-8	Pentachloronitrobenzene	ND	260
87-86-5	Pentachlorophenol	ND	1000
62-44-2	Phenacetin	ND	260
85-01-8	Phenanthrene	ND	260
108-95-2	Phenol	ND	260
129-00-0	Pyrene	ND	260
110-86-1	Pyridine	ND	260
94-59-7	Safrole	ND	260
111-91-1	bis(-2-Chloroethoxy)methane	ND	260

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	38	22 - 97
Phenol-d6 (SS2)	40	23 - 99
Nitrobenzene-d5 (SS3)	55	20 - 98
2-Fluorobiphenyl (SS4)	60	23 - 104
2,4,6-Tribromophenol (SS5)	38	12 - 127
p-Terphenyl-d14 (SS6)	60	23 - 120

Comments: The following compounds did not meet the initial calibration criterion of %RSD<20 so they are quantitated using a first order linear regression, the RL for these compounds is 5.0 ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0 ppb.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Soils Medium Level

Client Sample ID:	R01-120314JT-0031	Lab Sample ID:	AB28341
Date of Collection:	3/27/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/2/12	Percent Solids:	81%
Dry Weight Extracted:	9.106 grams	Extract Dilution:	1
Wet Weight Extracted:	11.283 grams	pH:	N/A
Final Volume:	1 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	280	
120-82-1	1,2,4-Trichlorobenzene	ND	280	
95-50-1	1,2-Dichlorobenzene	ND	280	
541-73-1	1,3-Dichlorobenzene	ND	280	
99-65-0	1,3-Dinitrobenzene	ND	280	
106-46-7	1,4-Dichlorobenzene	ND	280	
130-15-4	1,4-Naphthoquinone	ND	280	
90-12-0	1-Methylnaphthalene	ND	280	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	280	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	280	
95-95-4	2,4,5-Trichlorophenol	ND	280	
88-06-2	2,4,6-Trichlorophenol	ND	280	
120-83-2	2,4-Dichlorophenol	ND	280	
51-28-5	2,4-Dinitrophenol	ND	1100	
121-14-2	2,4-Dinitrotoluene	ND	280	
105-67-9	2,4-dimethylphenol	ND	280	
87-65-0	2,6-Dichlorophenol	ND	280	
606-20-2	2,6-Dinitrotoluene	ND	280	
91-58-7	2-Chloronaphthalene	ND	280	
95-57-8	2-Chlorophenol	ND	280	
91-57-6	2-Methylnaphthalene	ND	280	
95-48-7	2-Methylphenol	ND	280	
88-74-4	2-Nitroaniline	ND	280	
88-75-5	2-Nitrophenol	ND	280	
108-39-4/106-44-.	3&4-Methylphenol	ND	550	
91-94-1	3,3'-Dichlorobenzidine	ND	280	
56-49-5	3-Methylcholanthrene	ND	280	
99-09-2	3-Nitroaniline	ND	280	
534-52-1	4,6-Dinitro-2-methylphenol	ND	550	
101-55-3	4-Bromophenyl-phenylether	ND	280	
59-50-7	4-Chloro-3-methylphenol	ND	280	
106-47-8	4-Chloroaniline	ND	280	
7005-72-3	4-Chlorophenyl-phenylether	ND	280	
100-01-6	4-Nitroaniline	ND	280	
100-02-7	4-Nitrophenol	ND	280	
56-57-5	4-nitroquinoline-1-oxide	ND	280	
83-32-9	Acenaphthene	ND	280	
208-96-8	Acenaphthylene	ND	280	
98-86-2	Acetophenone	ND	280	
62-53-3	Aniline	ND	280	
120-12-7	Anthracene	ND	280	

140-57-8	Aramite	ND	550
103-33-3	Azobenzene	ND	280
92-87-5	Benzidine	ND	280
56-55-3	Benzo(a)anthracene	ND	280
50-32-8	Benzo(a)pyrene	ND	280
205-99-2	Benzo(b)fluoranthene	ND	280
191-24-2	Benzo(g,h,i)perylene	ND	280
207-08-9	Benzo(k)fluoranthene	ND	280
65-85-0	Benzoic acid	ND	550
100-51-6	Benzyl alcohol	ND	280
111-44-4	Bis(2-Chloroethyl)ether	ND	280
117-81-7	Bis(2-ethylhexyl)phthalate	ND	280
85-68-7	Butylbenzylphthalate	ND	280
86-74-8	Carbazole	ND	280
510-15-6	Chlorobenzilate	ND	280
218-01-9	Chrysene	ND	280
84-74-2	Di-n-butylphthalate	ND	280
117-84-0	Di-n-octyl phthalate	ND	280
53-70-3	Dibenz(a,h)anthracene	ND	280
132-64-9	Dibenzofuran	ND	280
84-66-2	Diethylphthalate	ND	280
131-11-3	Dimethyl phthalate	ND	280
88-85-7	Dinoseb	ND	550
62-50-0	Ethyl methanesulfonate	ND	280
206-44-0	Fluoranthene	ND	280
86-73-7	Fluorene	ND	280
118-74-1	Hexachlorobenzene	ND	280
87-68-3	Hexachlorobutadiene	ND	280
77-47-4	Hexachlorocyclopentadiene	ND	280
67-72-1	Hexachloroethane	ND	280
1888-71-7	Hexachloropropene	ND	280
193-39-5	Indeno(1,2,3-cd)pyrene	ND	280
465-73-6	Isodrin	ND	280
78-59-1	Isophorone	ND	280
120-58-1	Isosafrole	ND	280
143-50-0	Kepone	ND	280
66-27-3	Methyl methanesulfonate	ND	280
86-30-6	N-Nitrosodiphenylamine	ND	280
621-64-7	N-nitroso-di-n-propylamine	ND	280
62-75-9	N-nitrosodimethylamine	ND	280
91-20-3	Naphthalene	ND	280
98-95-3	Nitrobenzene	ND	280
608-93-5	Pentachlorobenzene	ND	280
82-68-8	Pentachloronitrobenzene	ND	280
87-86-5	Pentachlorophenol	ND	1100
62-44-2	Phenacetin	ND	280
85-01-8	Phenanthrene	ND	280
108-95-2	Phenol	ND	280
129-00-0	Pyrene	ND	280
110-86-1	Pyridine	ND	280
94-59-7	Safrole	ND	280
111-91-1	bis(-2-Chloroethoxy)methane	ND	280

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	43	22 - 97
Phenol-d6 (SS2)	45	23 - 99
Nitrobenzene-d5 (SS3)	60	20 - 98
2-Fluorobiphenyl (SS4)	60	23 - 104
2,4,6-Tribromophenol (SS5)	40	12 - 127
p-Terphenyl-d14 (SS6)	70	23 - 120

Comments: The following compounds did not meet the initial calibration criterion of %RSD<20 so they are quantitated using a first order linear regression, the RL for these compounds is 5.0 ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0 ppb.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Soils Medium Level

Client Sample ID:	R01-120314JT-0036	Lab Sample ID:	AB28343
Date of Collection:	3/28/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/2/12	Percent Solids:	89%
Dry Weight Extracted:	11.043 grams	Extract Dilution:	1
Wet Weight Extracted:	12.343 grams	pH:	N/A
Final Volume:	1 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	230	
120-82-1	1,2,4-Trichlorobenzene	ND	230	
95-50-1	1,2-Dichlorobenzene	ND	230	
541-73-1	1,3-Dichlorobenzene	ND	230	
99-65-0	1,3-Dinitrobenzene	ND	230	
106-46-7	1,4-Dichlorobenzene	ND	230	
130-15-4	1,4-Naphthoquinone	ND	230	
90-12-0	1-Methylnaphthalene	ND	230	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	230	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	230	
95-95-4	2,4,5-Trichlorophenol	ND	230	
88-06-2	2,4,6-Trichlorophenol	ND	230	
120-83-2	2,4-Dichlorophenol	ND	230	
51-28-5	2,4-Dinitrophenol	ND	910	
121-14-2	2,4-Dinitrotoluene	ND	230	
105-67-9	2,4-dimethylphenol	ND	230	
87-65-0	2,6-Dichlorophenol	ND	230	
606-20-2	2,6-Dinitrotoluene	ND	230	
91-58-7	2-Chloronaphthalene	ND	230	
95-57-8	2-Chlorophenol	ND	230	
91-57-6	2-Methylnaphthalene	ND	230	
95-48-7	2-Methylphenol	ND	230	
88-74-4	2-Nitroaniline	ND	230	
88-75-5	2-Nitrophenol	ND	230	
108-39-4/106-44-.	3&4-Methylphenol	ND	450	
91-94-1	3,3'-Dichlorobenzidine	ND	230	
56-49-5	3-Methylcholanthrene	ND	230	
99-09-2	3-Nitroaniline	ND	230	
534-52-1	4,6-Dinitro-2-methylphenol	ND	450	
101-55-3	4-Bromophenyl-phenylether	ND	230	
59-50-7	4-Chloro-3-methylphenol	ND	230	
106-47-8	4-Chloroaniline	ND	230	
7005-72-3	4-Chlorophenyl-phenylether	ND	230	
100-01-6	4-Nitroaniline	ND	230	
100-02-7	4-Nitrophenol	ND	230	
56-57-5	4-nitroquinoline-1-oxide	ND	230	
83-32-9	Acenaphthene	ND	230	
208-96-8	Acenaphthylene	ND	230	
98-86-2	Acetophenone	ND	230	
62-53-3	Aniline	ND	230	
120-12-7	Anthracene	ND	230	

140-57-8	Aramite	ND	450
103-33-3	Azobenzene	ND	230
92-87-5	Benzidine	ND	230
56-55-3	Benzo(a)anthracene	ND	230
50-32-8	Benzo(a)pyrene	ND	230
205-99-2	Benzo(b)fluoranthene	ND	230
191-24-2	Benzo(g,h,i)perylene	ND	230
207-08-9	Benzo(k)fluoranthene	ND	230
65-85-0	Benzoic acid	ND	450
100-51-6	Benzyl alcohol	ND	230
111-44-4	Bis(2-Chloroethyl)ether	ND	230
117-81-7	Bis(2-ethylhexyl)phthalate	ND	230
85-68-7	Butylbenzylphthalate	ND	230
86-74-8	Carbazole	ND	230
510-15-6	Chlorobenzilate	ND	230
218-01-9	Chrysene	ND	230
84-74-2	Di-n-butylphthalate	ND	230
117-84-0	Di-n-octyl phthalate	ND	230
53-70-3	Dibenz(a,h)anthracene	ND	230
132-64-9	Dibenzofuran	ND	230
84-66-2	Diethylphthalate	ND	230
131-11-3	Dimethyl phthalate	ND	230
88-85-7	Dinoseb	ND	450
62-50-0	Ethyl methanesulfonate	ND	230
206-44-0	Fluoranthene	ND	230
86-73-7	Fluorene	ND	230
118-74-1	Hexachlorobenzene	ND	230
87-68-3	Hexachlorobutadiene	ND	230
77-47-4	Hexachlorocyclopentadiene	ND	230
67-72-1	Hexachloroethane	ND	230
1888-71-7	Hexachloropropene	ND	230
193-39-5	Indeno(1,2,3-cd)pyrene	ND	230
465-73-6	Isodrin	ND	230
78-59-1	Isophorone	ND	230
120-58-1	Isosafrole	ND	230
143-50-0	Kepone	ND	230
66-27-3	Methyl methanesulfonate	ND	230
86-30-6	N-Nitrosodiphenylamine	ND	230
621-64-7	N-nitroso-di-n-propylamine	ND	230
62-75-9	N-nitrosodimethylamine	ND	230
91-20-3	Naphthalene	ND	230
98-95-3	Nitrobenzene	ND	230
608-93-5	Pentachlorobenzene	ND	230
82-68-8	Pentachloronitrobenzene	ND	230
87-86-5	Pentachlorophenol	ND	910
62-44-2	Phenacetin	ND	230
85-01-8	Phenanthrene	ND	230
108-95-2	Phenol	ND	230
129-00-0	Pyrene	ND	230
110-86-1	Pyridine	ND	230
94-59-7	Safrole	ND	230
111-91-1	bis(-2-Chloroethoxy)methane	ND	230

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	43	22 - 97
Phenol-d6 (SS2)	43	23 - 99
Nitrobenzene-d5 (SS3)	60	20 - 98
2-Fluorobiphenyl (SS4)	65	23 - 104
2,4,6-Tribromophenol (SS5)	43	12 - 127
p-Terphenyl-d14 (SS6)	75	23 - 120

Comments: The following compounds did not meet the initial calibration criterion of %RSD<20 so they are quantitated using a first order linear regression, the RL for these compounds is 5.0 ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0 ppb.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Soils Medium Level

Client Sample ID:	R01-120314JT-0050	Lab Sample ID:	AB28345
Date of Collection:	3/28/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/3/12	Percent Solids:	69%
Dry Weight Extracted:	7.776 grams	Extract Dilution:	1
Wet Weight Extracted:	11.315 grams	pH:	N/A
Final Volume:	6 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	1900	
120-82-1	1,2,4-Trichlorobenzene	ND	1900	
95-50-1	1,2-Dichlorobenzene	ND	1900	
541-73-1	1,3-Dichlorobenzene	ND	1900	
99-65-0	1,3-Dinitrobenzene	ND	1900	
106-46-7	1,4-Dichlorobenzene	ND	1900	
130-15-4	1,4-Naphthoquinone	ND	1900	
90-12-0	1-Methylnaphthalene	**11000**	1900	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	1900	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	1900	
95-95-4	2,4,5-Trichlorophenol	ND	1900	
88-06-2	2,4,6-Trichlorophenol	ND	1900	
120-83-2	2,4-Dichlorophenol	ND	1900	
51-28-5	2,4-Dinitrophenol	ND	7700	
121-14-2	2,4-Dinitrotoluene	ND	1900	
105-67-9	2,4-dimethylphenol	ND	1900	
87-65-0	2,6-Dichlorophenol	ND	1900	
606-20-2	2,6-Dinitrotoluene	ND	1900	
91-58-7	2-Chloronaphthalene	ND	1900	
95-57-8	2-Chlorophenol	ND	1900	
91-57-6	2-Methylnaphthalene	**9000**	1900	
95-48-7	2-Methylphenol	ND	1900	
88-74-4	2-Nitroaniline	ND	1900	
88-75-5	2-Nitrophenol	ND	1900	
108-39-4/106-44-.	3&4-Methylphenol	ND	3900	
91-94-1	3,3'-Dichlorobenzidine	ND	1900	
56-49-5	3-Methylcholanthrene	ND	1900	
99-09-2	3-Nitroaniline	ND	1900	
534-52-1	4,6-Dinitro-2-methylphenol	ND	3900	
101-55-3	4-Bromophenyl-phenylether	ND	1900	
59-50-7	4-Chloro-3-methylphenol	ND	1900	
106-47-8	4-Chloroaniline	ND	1900	
7005-72-3	4-Chlorophenyl-phenylether	ND	1900	
100-01-6	4-Nitroaniline	ND	1900	
100-02-7	4-Nitrophenol	ND	1900	
56-57-5	4-nitroquinoline-1-oxide	ND	1900	
83-32-9	Acenaphthene	ND	1900	
208-96-8	Acenaphthylene	ND	1900	
98-86-2	Acetophenone	ND	1900	
62-53-3	Aniline	ND	1900	
120-12-7	Anthracene	ND	1900	

140-57-8	Aramite	ND	3900
103-33-3	Azobenzene	ND	1900
92-87-5	Benzidine	ND	1900
56-55-3	Benzo(a)anthracene	**3200**	1900
50-32-8	Benzo(a)pyrene	ND	1900
205-99-2	Benzo(b)fluoranthene	ND	1900
191-24-2	Benzo(g,h,i)perylene	ND	1900
207-08-9	Benzo(k)fluoranthene	ND	1900
65-85-0	Benzoic acid	ND	3900
100-51-6	Benzyl alcohol	ND	1900
111-44-4	Bis(2-Chloroethyl)ether	ND	1900
117-81-7	Bis(2-ethylhexyl)phthalate	ND	1900
85-68-7	Butylbenzylphthalate	ND	1900
86-74-8	Carbazole	ND	1900
510-15-6	Chlorobenzilate	ND	1900
218-01-9	Chrysene	**6200**	1900
84-74-2	Di-n-butylphthalate	ND	1900
117-84-0	Di-n-octyl phthalate	ND	1900
53-70-3	Dibenz(a,h)anthracene	ND	1900
132-64-9	Dibenzofuran	ND	1900
84-66-2	Diethylphthalate	ND	1900
131-11-3	Dimethyl phthalate	ND	1900
88-85-7	Dinoseb	ND	3900
62-50-0	Ethyl methanesulfonate	ND	1900
206-44-0	Fluoranthene	ND	1900
86-73-7	Fluorene	ND	1900
118-74-1	Hexachlorobenzene	ND	1900
87-68-3	Hexachlorobutadiene	ND	1900
77-47-4	Hexachlorocyclopentadiene	ND	1900
67-72-1	Hexachloroethane	ND	1900
1888-71-7	Hexachloropropene	ND	1900
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1900
465-73-6	Isodrin	ND	1900
78-59-1	Isophorone	ND	1900
120-58-1	Isosafrole	ND	1900
143-50-0	Kepone	ND	1900
66-27-3	Methyl methanesulfonate	ND	1900
86-30-6	N-Nitrosodiphenylamine	ND	1900
621-64-7	N-nitroso-di-n-propylamine	ND	1900
62-75-9	N-nitrosodimethylamine	ND	1900
91-20-3	Naphthalene	ND	1900
98-95-3	Nitrobenzene	ND	1900
608-93-5	Pentachlorobenzene	ND	1900
82-68-8	Pentachloronitrobenzene	ND	1900
87-86-5	Pentachlorophenol	ND	7700
62-44-2	Phenacetin	ND	1900
85-01-8	Phenanthrene	**13000**	1900
108-95-2	Phenol	ND	1900
129-00-0	Pyrene	**7900**	1900
110-86-1	Pyridine	ND	1900
94-59-7	Safrole	ND	1900
111-91-1	bis(-2-Chloroethoxy)methane	ND	1900

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	33	22 - 97
Phenol-d6 (SS2)	38	23 - 99
Nitrobenzene-d5 (SS3)	60	20 - 98
2-Fluorobiphenyl (SS4)	75	23 - 104
2,4,6-Tribromophenol (SS5)	50	12 - 127
p-Terphenyl-d14 (SS6)	85	23 - 120

Comments: The following compounds did not meet the initial calibration criterion of %RSD<20 so they are quantitated using a first order linear regression, the RL for these compounds is 5.0 ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0 ppb.

This sample (SB-31 (2-3)) was viscous and difficult to bring down to 1mL, therefore the final volume of this sample was brought up to 6mL.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Soils Medium Level

Client Sample ID:	R01-120314JT-0057	Lab Sample ID:	AB28347
Date of Collection:	3/28/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/2/12	Percent Solids:	89%
Dry Weight Extracted:	11.069 grams	Extract Dilution:	1
Wet Weight Extracted:	12.461 grams	pH:	N/A
Final Volume:	1 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	230	
120-82-1	1,2,4-Trichlorobenzene	ND	230	
95-50-1	1,2-Dichlorobenzene	ND	230	
541-73-1	1,3-Dichlorobenzene	ND	230	
99-65-0	1,3-Dinitrobenzene	ND	230	
106-46-7	1,4-Dichlorobenzene	ND	230	
130-15-4	1,4-Naphthoquinone	ND	230	
90-12-0	1-Methylnaphthalene	ND	230	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	230	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	230	
95-95-4	2,4,5-Trichlorophenol	ND	230	
88-06-2	2,4,6-Trichlorophenol	ND	230	
120-83-2	2,4-Dichlorophenol	ND	230	
51-28-5	2,4-Dinitrophenol	ND	900	
121-14-2	2,4-Dinitrotoluene	ND	230	
105-67-9	2,4-dimethylphenol	ND	230	
87-65-0	2,6-Dichlorophenol	ND	230	
606-20-2	2,6-Dinitrotoluene	ND	230	
91-58-7	2-Chloronaphthalene	ND	230	
95-57-8	2-Chlorophenol	ND	230	
91-57-6	2-Methylnaphthalene	ND	230	
95-48-7	2-Methylphenol	ND	230	
88-74-4	2-Nitroaniline	ND	230	
88-75-5	2-Nitrophenol	ND	230	
108-39-4/106-44-.	3&4-Methylphenol	ND	450	
91-94-1	3,3'-Dichlorobenzidine	ND	230	
56-49-5	3-Methylcholanthrene	ND	230	
99-09-2	3-Nitroaniline	ND	230	
534-52-1	4,6-Dinitro-2-methylphenol	ND	450	
101-55-3	4-Bromophenyl-phenylether	ND	230	
59-50-7	4-Chloro-3-methylphenol	ND	230	
106-47-8	4-Chloroaniline	ND	230	
7005-72-3	4-Chlorophenyl-phenylether	ND	230	
100-01-6	4-Nitroaniline	ND	230	
100-02-7	4-Nitrophenol	ND	230	
56-57-5	4-nitroquinoline-1-oxide	ND	230	
83-32-9	Acenaphthene	ND	230	
208-96-8	Acenaphthylene	ND	230	
98-86-2	Acetophenone	ND	230	
62-53-3	Aniline	ND	230	
120-12-7	Anthracene	ND	230	

140-57-8	Aramite	ND	450
103-33-3	Azobenzene	ND	230
92-87-5	Benzidine	ND	230
56-55-3	Benzo(a)anthracene	ND	230
50-32-8	Benzo(a)pyrene	ND	230
205-99-2	Benzo(b)fluoranthene	ND	230
191-24-2	Benzo(g,h,i)perylene	ND	230
207-08-9	Benzo(k)fluoranthene	ND	230
65-85-0	Benzoic acid	ND	450
100-51-6	Benzyl alcohol	ND	230
111-44-4	Bis(2-Chloroethyl)ether	ND	230
117-81-7	Bis(2-ethylhexyl)phthalate	ND	230
85-68-7	Butylbenzylphthalate	ND	230
86-74-8	Carbazole	ND	230
510-15-6	Chlorobenzilate	ND	230
218-01-9	Chrysene	ND	230
84-74-2	Di-n-butylphthalate	ND	230
117-84-0	Di-n-octyl phthalate	ND	230
53-70-3	Dibenz(a,h)anthracene	ND	230
132-64-9	Dibenzofuran	ND	230
84-66-2	Diethylphthalate	ND	230
131-11-3	Dimethyl phthalate	ND	230
88-85-7	Dinoseb	ND	450
62-50-0	Ethyl methanesulfonate	ND	230
206-44-0	Fluoranthene	ND	230
86-73-7	Fluorene	ND	230
118-74-1	Hexachlorobenzene	ND	230
87-68-3	Hexachlorobutadiene	ND	230
77-47-4	Hexachlorocyclopentadiene	ND	230
67-72-1	Hexachloroethane	ND	230
1888-71-7	Hexachloropropene	ND	230
193-39-5	Indeno(1,2,3-cd)pyrene	ND	230
465-73-6	Isodrin	ND	230
78-59-1	Isophorone	ND	230
120-58-1	Isosafrole	ND	230
143-50-0	Kepone	ND	230
66-27-3	Methyl methanesulfonate	ND	230
86-30-6	N-Nitrosodiphenylamine	ND	230
621-64-7	N-nitroso-di-n-propylamine	ND	230
62-75-9	N-nitrosodimethylamine	ND	230
91-20-3	Naphthalene	ND	230
98-95-3	Nitrobenzene	ND	230
608-93-5	Pentachlorobenzene	ND	230
82-68-8	Pentachloronitrobenzene	ND	230
87-86-5	Pentachlorophenol	ND	900
62-44-2	Phenacetin	ND	230
85-01-8	Phenanthrene	ND	230
108-95-2	Phenol	ND	230
129-00-0	Pyrene	ND	230
110-86-1	Pyridine	ND	230
94-59-7	Safrole	ND	230
111-91-1	bis(-2-Chloroethoxy)methane	ND	230

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	43	22 - 97
Phenol-d6 (SS2)	43	23 - 99
Nitrobenzene-d5 (SS3)	60	20 - 98
2-Fluorobiphenyl (SS4)	65	23 - 104
2,4,6-Tribromophenol (SS5)	45	12 - 127
p-Terphenyl-d14 (SS6)	75	23 - 120

Comments: The following compounds did not meet the initial calibration criterion of %RSD<20 so they are quantitated using a first order linear regression, the RL for these compounds is 5.0 ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0 ppb.

3-methylcholanthrene is not present in the LFB/MS spiking solution.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/2/12	Percent Solids:	100%
Dry Weight Extracted:	11.193 grams	Extract Dilution:	1
Wet Weight Extracted:	11.206 grams	pH:	N/A
Final Volume:	1 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	220	
120-82-1	1,2,4-Trichlorobenzene	ND	220	
95-50-1	1,2-Dichlorobenzene	ND	220	
541-73-1	1,3-Dichlorobenzene	ND	220	
99-65-0	1,3-Dinitrobenzene	ND	220	
106-46-7	1,4-Dichlorobenzene	ND	220	
130-15-4	1,4-Naphthoquinone	ND	220	
90-12-0	1-Methylnaphthalene	ND	220	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	220	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	220	
95-95-4	2,4,5-Trichlorophenol	ND	220	
88-06-2	2,4,6-Trichlorophenol	ND	220	
120-83-2	2,4-Dichlorophenol	ND	220	
51-28-5	2,4-Dinitrophenol	ND	890	
121-14-2	2,4-Dinitrotoluene	ND	220	
105-67-9	2,4-dimethylphenol	ND	220	
87-65-0	2,6-Dichlorophenol	ND	220	
606-20-2	2,6-Dinitrotoluene	ND	220	
91-58-7	2-Chloronaphthalene	ND	220	
95-57-8	2-Chlorophenol	ND	220	
91-57-6	2-Methylnaphthalene	ND	220	
95-48-7	2-Methylphenol	ND	220	
88-74-4	2-Nitroaniline	ND	220	
88-75-5	2-Nitrophenol	ND	220	
108-39-4/106-44-.	3&4-Methylphenol	ND	450	
91-94-1	3,3'-Dichlorobenzidine	ND	220	
56-49-5	3-Methylcholanthrene	ND	220	
99-09-2	3-Nitroaniline	ND	220	
534-52-1	4,6-Dinitro-2-methylphenol	ND	450	
101-55-3	4-Bromophenyl-phenylether	ND	220	
59-50-7	4-Chloro-3-methylphenol	ND	220	
106-47-8	4-Chloroaniline	ND	220	
7005-72-3	4-Chlorophenyl-phenylether	ND	220	
100-01-6	4-Nitroaniline	ND	220	
100-02-7	4-Nitrophenol	ND	220	
56-57-5	4-nitroquinoline-1-oxide	ND	220	
83-32-9	Acenaphthene	ND	220	
208-96-8	Acenaphthylene	ND	220	
98-86-2	Acetophenone	ND	220	
62-53-3	Aniline	ND	220	
120-12-7	Anthracene	ND	220	

140-57-8	Aramite	ND	450
103-33-3	Azobenzene	ND	220
92-87-5	Benzidine	ND	220
56-55-3	Benzo(a)anthracene	ND	220
50-32-8	Benzo(a)pyrene	ND	220
205-99-2	Benzo(b)fluoranthene	ND	220
191-24-2	Benzo(g,h,i)perylene	ND	220
207-08-9	Benzo(k)fluoranthene	ND	220
65-85-0	Benzoic acid	ND	450
100-51-6	Benzyl alcohol	ND	220
111-44-4	Bis(2-Chloroethyl)ether	ND	220
117-81-7	Bis(2-ethylhexyl)phthalate	ND	220
85-68-7	Butylbenzylphthalate	ND	220
86-74-8	Carbazole	ND	220
510-15-6	Chlorobenzilate	ND	220
218-01-9	Chrysene	ND	220
84-74-2	Di-n-butylphthalate	ND	220
117-84-0	Di-n-octyl phthalate	ND	220
53-70-3	Dibenz(a,h)anthracene	ND	220
132-64-9	Dibenzofuran	ND	220
84-66-2	Diethylphthalate	ND	220
131-11-3	Dimethyl phthalate	ND	220
88-85-7	Dinoseb	ND	450
62-50-0	Ethyl methanesulfonate	ND	220
206-44-0	Fluoranthene	ND	220
86-73-7	Fluorene	ND	220
118-74-1	Hexachlorobenzene	ND	220
87-68-3	Hexachlorobutadiene	ND	220
77-47-4	Hexachlorocyclopentadiene	ND	220
67-72-1	Hexachloroethane	ND	220
1888-71-7	Hexachloropropene	ND	220
193-39-5	Indeno(1,2,3-cd)pyrene	ND	220
465-73-6	Isodrin	ND	220
78-59-1	Isophorone	ND	220
120-58-1	Isosafrole	ND	220
143-50-0	Kepone	ND	220
66-27-3	Methyl methanesulfonate	ND	220
86-30-6	N-Nitrosodiphenylamine	ND	220
621-64-7	N-nitroso-di-n-propylamine	ND	220
62-75-9	N-nitrosodimethylamine	ND	220
91-20-3	Naphthalene	ND	220
98-95-3	Nitrobenzene	ND	220
608-93-5	Pentachlorobenzene	ND	220
82-68-8	Pentachloronitrobenzene	ND	220
87-86-5	Pentachlorophenol	ND	890
62-44-2	Phenacetin	ND	220
85-01-8	Phenanthrene	ND	220
108-95-2	Phenol	ND	220
129-00-0	Pyrene	ND	220
110-86-1	Pyridine	ND	220
94-59-7	Safrole	ND	220
111-91-1	bis(-2-Chloroethoxy)methane	ND	220

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	51	22 - 97
Phenol-d6 (SS2)	57	23 - 99
Nitrobenzene-d5 (SS3)	84	20 - 98
2-Fluorobiphenyl (SS4)	94	23 - 104
2,4,6-Tribromophenol (SS5)	41	12 - 127
p-Terphenyl-d14 (SS6)	114	23 - 120

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Soils Medium Level

Client Sample ID:	R01-120314JT-0060	Lab Sample ID:	AB28348
Date of Collection:	3/28/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/2/12	Percent Solids:	87%
Dry Weight Extracted:	9.781 grams	Extract Dilution:	1
Wet Weight Extracted:	11.235 grams	pH:	N/A
Final Volume:	1 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	260	
120-82-1	1,2,4-Trichlorobenzene	ND	260	
95-50-1	1,2-Dichlorobenzene	ND	260	
541-73-1	1,3-Dichlorobenzene	ND	260	
99-65-0	1,3-Dinitrobenzene	ND	260	
106-46-7	1,4-Dichlorobenzene	ND	260	
130-15-4	1,4-Naphthoquinone	ND	260	
90-12-0	1-Methylnaphthalene	ND	260	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	260	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	260	
95-95-4	2,4,5-Trichlorophenol	ND	260	
88-06-2	2,4,6-Trichlorophenol	ND	260	
120-83-2	2,4-Dichlorophenol	ND	260	
51-28-5	2,4-Dinitrophenol	ND	1000	
121-14-2	2,4-Dinitrotoluene	ND	260	
105-67-9	2,4-dimethylphenol	ND	260	
87-65-0	2,6-Dichlorophenol	ND	260	
606-20-2	2,6-Dinitrotoluene	ND	260	
91-58-7	2-Chloronaphthalene	ND	260	
95-57-8	2-Chlorophenol	ND	260	
91-57-6	2-Methylnaphthalene	ND	260	
95-48-7	2-Methylphenol	ND	260	
88-74-4	2-Nitroaniline	ND	260	
88-75-5	2-Nitrophenol	ND	260	
108-39-4/106-44-.	3&4-Methylphenol	ND	510	
91-94-1	3,3'-Dichlorobenzidine	ND	260	
56-49-5	3-Methylcholanthrene	ND	260	
99-09-2	3-Nitroaniline	ND	260	
534-52-1	4,6-Dinitro-2-methylphenol	ND	510	
101-55-3	4-Bromophenyl-phenylether	ND	260	
59-50-7	4-Chloro-3-methylphenol	ND	260	
106-47-8	4-Chloroaniline	ND	260	
7005-72-3	4-Chlorophenyl-phenylether	ND	260	
100-01-6	4-Nitroaniline	ND	260	
100-02-7	4-Nitrophenol	ND	260	
56-57-5	4-nitroquinoline-1-oxide	ND	260	
83-32-9	Acenaphthene	ND	260	
208-96-8	Acenaphthylene	ND	260	
98-86-2	Acetophenone	ND	260	
62-53-3	Aniline	ND	260	
120-12-7	Anthracene	ND	260	

140-57-8	Aramite	ND	510
103-33-3	Azobenzene	ND	260
92-87-5	Benzidine	ND	260
56-55-3	Benzo(a)anthracene	ND	260
50-32-8	Benzo(a)pyrene	ND	260
205-99-2	Benzo(b)fluoranthene	ND	260
191-24-2	Benzo(g,h,i)perylene	ND	260
207-08-9	Benzo(k)fluoranthene	ND	260
65-85-0	Benzoic acid	ND	510
100-51-6	Benzyl alcohol	ND	260
111-44-4	Bis(2-Chloroethyl)ether	ND	260
117-81-7	Bis(2-ethylhexyl)phthalate	ND	260
85-68-7	Butylbenzylphthalate	ND	260
86-74-8	Carbazole	ND	260
510-15-6	Chlorobenzilate	ND	260
218-01-9	Chrysene	ND	260
84-74-2	Di-n-butylphthalate	ND	260
117-84-0	Di-n-octyl phthalate	ND	260
53-70-3	Dibenz(a,h)anthracene	ND	260
132-64-9	Dibenzofuran	ND	260
84-66-2	Diethylphthalate	ND	260
131-11-3	Dimethyl phthalate	**280**	260
88-85-7	Dinoseb	ND	510
62-50-0	Ethyl methanesulfonate	ND	260
206-44-0	Fluoranthene	ND	260
86-73-7	Fluorene	ND	260
118-74-1	Hexachlorobenzene	ND	260
87-68-3	Hexachlorobutadiene	ND	260
77-47-4	Hexachlorocyclopentadiene	ND	260
67-72-1	Hexachloroethane	ND	260
1888-71-7	Hexachloropropene	ND	260
193-39-5	Indeno(1,2,3-cd)pyrene	ND	260
465-73-6	Isodrin	ND	260
78-59-1	Isophorone	ND	260
120-58-1	Isosafrole	ND	260
143-50-0	Kepone	ND	260
66-27-3	Methyl methanesulfonate	ND	260
86-30-6	N-Nitrosodiphenylamine	ND	260
621-64-7	N-nitroso-di-n-propylamine	ND	260
62-75-9	N-nitrosodimethylamine	ND	260
91-20-3	Naphthalene	**440**	260
98-95-3	Nitrobenzene	ND	260
608-93-5	Pentachlorobenzene	ND	260
82-68-8	Pentachloronitrobenzene	ND	260
87-86-5	Pentachlorophenol	ND	1000
62-44-2	Phenacetin	ND	260
85-01-8	Phenanthrene	ND	260
108-95-2	Phenol	ND	260
129-00-0	Pyrene	ND	260
110-86-1	Pyridine	ND	260
94-59-7	Safrole	ND	260
111-91-1	bis(-2-Chloroethoxy)methane	ND	260

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	45	22 - 97
Phenol-d6 (SS2)	48	23 - 99
Nitrobenzene-d5 (SS3)	65	20 - 98
2-Fluorobiphenyl (SS4)	65	23 - 104
2,4,6-Tribromophenol (SS5)	45	12 - 127
p-Terphenyl-d14 (SS6)	75	23 - 120

Comments: The following compounds did not meet the initial calibration criterion of %RSD<20 so they are quantitated using a first order linear regression, the RL for these compounds is 5.0 ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0 ppb.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Soils Medium Level

Client Sample ID:	R01-120314JT-0065	Lab Sample ID:	AB28350
Date of Collection:	3/29/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/2/12	Percent Solids:	86%
Dry Weight Extracted:	9.908 grams	Extract Dilution:	1
Wet Weight Extracted:	11.535 grams	pH:	N/A
Final Volume:	1 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	250	
120-82-1	1,2,4-Trichlorobenzene	ND	250	
95-50-1	1,2-Dichlorobenzene	ND	250	
541-73-1	1,3-Dichlorobenzene	ND	250	
99-65-0	1,3-Dinitrobenzene	ND	250	
106-46-7	1,4-Dichlorobenzene	ND	250	
130-15-4	1,4-Naphthoquinone	ND	250	
90-12-0	1-Methylnaphthalene	ND	250	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	250	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	250	
95-95-4	2,4,5-Trichlorophenol	ND	250	
88-06-2	2,4,6-Trichlorophenol	ND	250	
120-83-2	2,4-Dichlorophenol	ND	250	
51-28-5	2,4-Dinitrophenol	ND	1000	
121-14-2	2,4-Dinitrotoluene	ND	250	
105-67-9	2,4-dimethylphenol	ND	250	
87-65-0	2,6-Dichlorophenol	ND	250	
606-20-2	2,6-Dinitrotoluene	ND	250	
91-58-7	2-Chloronaphthalene	ND	250	
95-57-8	2-Chlorophenol	ND	250	
91-57-6	2-Methylnaphthalene	ND	250	
95-48-7	2-Methylphenol	ND	250	
88-74-4	2-Nitroaniline	ND	250	
88-75-5	2-Nitrophenol	ND	250	
108-39-4/106-44-.	3&4-Methylphenol	ND	510	
91-94-1	3,3'-Dichlorobenzidine	ND	250	
56-49-5	3-Methylcholanthrene	ND	250	
99-09-2	3-Nitroaniline	ND	250	
534-52-1	4,6-Dinitro-2-methylphenol	ND	510	
101-55-3	4-Bromophenyl-phenylether	ND	250	
59-50-7	4-Chloro-3-methylphenol	ND	250	
106-47-8	4-Chloroaniline	ND	250	
7005-72-3	4-Chlorophenyl-phenylether	ND	250	
100-01-6	4-Nitroaniline	ND	250	
100-02-7	4-Nitrophenol	ND	250	
56-57-5	4-nitroquinoline-1-oxide	ND	250	
83-32-9	Acenaphthene	ND	250	
208-96-8	Acenaphthylene	ND	250	
98-86-2	Acetophenone	ND	250	
62-53-3	Aniline	ND	250	
120-12-7	Anthracene	ND	250	

140-57-8	Aramite	ND	510
103-33-3	Azobenzene	ND	250
92-87-5	Benzidine	ND	250
56-55-3	Benzo(a)anthracene	ND	250
50-32-8	Benzo(a)pyrene	ND	250
205-99-2	Benzo(b)fluoranthene	ND	250
191-24-2	Benzo(g,h,i)perylene	ND	250
207-08-9	Benzo(k)fluoranthene	ND	250
65-85-0	Benzoic acid	ND	510
100-51-6	Benzyl alcohol	ND	250
111-44-4	Bis(2-Chloroethyl)ether	ND	250
117-81-7	Bis(2-ethylhexyl)phthalate	ND	250
85-68-7	Butylbenzylphthalate	ND	250
86-74-8	Carbazole	ND	250
510-15-6	Chlorobenzilate	ND	250
218-01-9	Chrysene	ND	250
84-74-2	Di-n-butylphthalate	ND	250
117-84-0	Di-n-octyl phthalate	ND	250
53-70-3	Dibenz(a,h)anthracene	ND	250
132-64-9	Dibenzofuran	ND	250
84-66-2	Diethylphthalate	ND	250
131-11-3	Dimethyl phthalate	ND	250
88-85-7	Dinoseb	ND	510
62-50-0	Ethyl methanesulfonate	ND	250
206-44-0	Fluoranthene	ND	250
86-73-7	Fluorene	ND	250
118-74-1	Hexachlorobenzene	ND	250
87-68-3	Hexachlorobutadiene	ND	250
77-47-4	Hexachlorocyclopentadiene	ND	250
67-72-1	Hexachloroethane	ND	250
1888-71-7	Hexachloropropene	ND	250
193-39-5	Indeno(1,2,3-cd)pyrene	ND	250
465-73-6	Isodrin	ND	250
78-59-1	Isophorone	ND	250
120-58-1	Isosafrole	ND	250
143-50-0	Kepone	ND	250
66-27-3	Methyl methanesulfonate	ND	250
86-30-6	N-Nitrosodiphenylamine	ND	250
621-64-7	N-nitroso-di-n-propylamine	ND	250
62-75-9	N-nitrosodimethylamine	ND	250
91-20-3	Naphthalene	ND	250
98-95-3	Nitrobenzene	ND	250
608-93-5	Pentachlorobenzene	ND	250
82-68-8	Pentachloronitrobenzene	ND	250
87-86-5	Pentachlorophenol	ND	1000
62-44-2	Phenacetin	ND	250
85-01-8	Phenanthrene	ND	250
108-95-2	Phenol	ND	250
129-00-0	Pyrene	ND	250
110-86-1	Pyridine	ND	250
94-59-7	Safrole	ND	250
111-91-1	bis(-2-Chloroethoxy)methane	ND	250

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	43	22 - 97
Phenol-d6 (SS2)	45	23 - 99
Nitrobenzene-d5 (SS3)	65	20 - 98
2-Fluorobiphenyl (SS4)	65	23 - 104
2,4,6-Tribromophenol (SS5)	45	12 - 127
p-Terphenyl-d14 (SS6)	75	23 - 120

Comments: The following compounds did not meet the initial calibration criterion of %RSD<20 so they are quantitated using a first order linear regression, the RL for these compounds is 5.0 ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0 ppb.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Soils Medium Level

Client Sample ID:	R01-120314JT-0075	Lab Sample ID:	AB28354
Date of Collection:	3/29/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/2/12	Percent Solids:	87%
Dry Weight Extracted:	9.947 grams	Extract Dilution:	1
Wet Weight Extracted:	11.414 grams	pH:	N/A
Final Volume:	1 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	250	
120-82-1	1,2,4-Trichlorobenzene	ND	250	
95-50-1	1,2-Dichlorobenzene	ND	250	
541-73-1	1,3-Dichlorobenzene	ND	250	
99-65-0	1,3-Dinitrobenzene	ND	250	
106-46-7	1,4-Dichlorobenzene	ND	250	
130-15-4	1,4-Naphthoquinone	ND	250	
90-12-0	1-Methylnaphthalene	ND	250	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	250	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	250	
95-95-4	2,4,5-Trichlorophenol	ND	250	
88-06-2	2,4,6-Trichlorophenol	ND	250	
120-83-2	2,4-Dichlorophenol	ND	250	
51-28-5	2,4-Dinitrophenol	ND	1000	
121-14-2	2,4-Dinitrotoluene	ND	250	
105-67-9	2,4-dimethylphenol	ND	250	
87-65-0	2,6-Dichlorophenol	ND	250	
606-20-2	2,6-Dinitrotoluene	ND	250	
91-58-7	2-Chloronaphthalene	ND	250	
95-57-8	2-Chlorophenol	ND	250	
91-57-6	2-Methylnaphthalene	ND	250	
95-48-7	2-Methylphenol	ND	250	
88-74-4	2-Nitroaniline	ND	250	
88-75-5	2-Nitrophenol	ND	250	
108-39-4/106-44-.	3&4-Methylphenol	ND	500	
91-94-1	3,3'-Dichlorobenzidine	ND	250	
56-49-5	3-Methylcholanthrene	ND	250	
99-09-2	3-Nitroaniline	ND	250	
534-52-1	4,6-Dinitro-2-methylphenol	ND	500	
101-55-3	4-Bromophenyl-phenylether	ND	250	
59-50-7	4-Chloro-3-methylphenol	ND	250	
106-47-8	4-Chloroaniline	ND	250	
7005-72-3	4-Chlorophenyl-phenylether	ND	250	
100-01-6	4-Nitroaniline	ND	250	
100-02-7	4-Nitrophenol	ND	250	
56-57-5	4-nitroquinoline-1-oxide	ND	250	
83-32-9	Acenaphthene	ND	250	
208-96-8	Acenaphthylene	ND	250	
98-86-2	Acetophenone	ND	250	
62-53-3	Aniline	ND	250	
120-12-7	Anthracene	ND	250	

140-57-8	Aramite	ND	500
103-33-3	Azobenzene	ND	250
92-87-5	Benzidine	ND	250
56-55-3	Benzo(a)anthracene	ND	250
50-32-8	Benzo(a)pyrene	ND	250
205-99-2	Benzo(b)fluoranthene	ND	250
191-24-2	Benzo(g,h,i)perylene	ND	250
207-08-9	Benzo(k)fluoranthene	ND	250
65-85-0	Benzoic acid	ND	500
100-51-6	Benzyl alcohol	ND	250
111-44-4	Bis(2-Chloroethyl)ether	ND	250
117-81-7	Bis(2-ethylhexyl)phthalate	**470**	250
85-68-7	Butylbenzylphthalate	ND	250
86-74-8	Carbazole	ND	250
510-15-6	Chlorobenzilate	ND	250
218-01-9	Chrysene	ND	250
84-74-2	Di-n-butylphthalate	ND	250
117-84-0	Di-n-octyl phthalate	ND	250
53-70-3	Dibenz(a,h)anthracene	ND	250
132-64-9	Dibenzofuran	ND	250
84-66-2	Diethylphthalate	ND	250
131-11-3	Dimethyl phthalate	ND	250
88-85-7	Dinoseb	ND	500
62-50-0	Ethyl methanesulfonate	ND	250
206-44-0	Fluoranthene	**400**	250
86-73-7	Fluorene	ND	250
118-74-1	Hexachlorobenzene	ND	250
87-68-3	Hexachlorobutadiene	ND	250
77-47-4	Hexachlorocyclopentadiene	ND	250
67-72-1	Hexachloroethane	ND	250
1888-71-7	Hexachloropropene	ND	250
193-39-5	Indeno(1,2,3-cd)pyrene	ND	250
465-73-6	Isodrin	ND	250
78-59-1	Isophorone	ND	250
120-58-1	Isosafrole	ND	250
143-50-0	Kepone	ND	250
66-27-3	Methyl methanesulfonate	ND	250
86-30-6	N-Nitrosodiphenylamine	ND	250
621-64-7	N-nitroso-di-n-propylamine	ND	250
62-75-9	N-nitrosodimethylamine	ND	250
91-20-3	Naphthalene	**360**	250
98-95-3	Nitrobenzene	ND	250
608-93-5	Pentachlorobenzene	ND	250
82-68-8	Pentachloronitrobenzene	ND	250
87-86-5	Pentachlorophenol	ND	1000
62-44-2	Phenacetin	ND	250
85-01-8	Phenanthrene	**250**	250
108-95-2	Phenol	ND	250
129-00-0	Pyrene	**290**	250
110-86-1	Pyridine	ND	250
94-59-7	Safrole	ND	250
111-91-1	bis(-2-Chloroethoxy)methane	ND	250

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	40	22 - 97
Phenol-d6 (SS2)	43	23 - 99
Nitrobenzene-d5 (SS3)	60	20 - 98
2-Fluorobiphenyl (SS4)	70	23 - 104
2,4,6-Tribromophenol (SS5)	45	12 - 127
p-Terphenyl-d14 (SS6)	70	23 - 120

Comments: The following compounds did not meet the initial calibration criterion of %RSD<20 so they are quantitated using a first order linear regression, the RL for these compounds is 5.0 ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0 ppb.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Soils Medium Level

Client Sample ID:	R01-120314JT-0100	Lab Sample ID:	AB28359
Date of Collection:	3/30/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Extracted:	N/A
Date of Analysis:	4/2/12	Percent Solids:	100%
Dry Weight Extracted:	10.295 grams	Extract Dilution:	1
Wet Weight Extracted:	10.295 grams	pH:	N/A
Final Volume:	1 mL	GPC Factor	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	240	
120-82-1	1,2,4-Trichlorobenzene	ND	240	
95-50-1	1,2-Dichlorobenzene	ND	240	
541-73-1	1,3-Dichlorobenzene	ND	240	
99-65-0	1,3-Dinitrobenzene	ND	240	
106-46-7	1,4-Dichlorobenzene	ND	240	
130-15-4	1,4-Naphthoquinone	ND	240	
90-12-0	1-Methylnaphthalene	**420**	240	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	240	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	240	
95-95-4	2,4,5-Trichlorophenol	ND	240	
88-06-2	2,4,6-Trichlorophenol	**330**	240	
120-83-2	2,4-Dichlorophenol	ND	240	
51-28-5	2,4-Dinitrophenol	ND	970	
121-14-2	2,4-Dinitrotoluene	ND	240	
105-67-9	2,4-dimethylphenol	ND	240	
87-65-0	2,6-Dichlorophenol	ND	240	
606-20-2	2,6-Dinitrotoluene	**380**	240	
91-58-7	2-Chloronaphthalene	ND	240	
95-57-8	2-Chlorophenol	ND	240	
91-57-6	2-Methylnaphthalene	ND	240	
95-48-7	2-Methylphenol	ND	240	
88-74-4	2-Nitroaniline	ND	240	
88-75-5	2-Nitrophenol	**870**	240	
108-39-4/106-44-.	3&4-Methylphenol	ND	490	
91-94-1	3,3'-Dichlorobenzidine	ND	240	
56-49-5	3-Methylcholanthrene	ND	240	
99-09-2	3-Nitroaniline	ND	240	
534-52-1	4,6-Dinitro-2-methylphenol	**410**	490	
101-55-3	4-Bromophenyl-phenylether	ND	240	
59-50-7	4-Chloro-3-methylphenol	ND	240	
106-47-8	4-Chloroaniline	ND	240	
7005-72-3	4-Chlorophenyl-phenylether	ND	240	
100-01-6	4-Nitroaniline	ND	240	
100-02-7	4-Nitrophenol	**1100**	240	
56-57-5	4-nitroquinoline-1-oxide	ND	240	
83-32-9	Acenaphthene	ND	240	
208-96-8	Acenaphthylene	ND	240	
98-86-2	Acetophenone	ND	240	
62-53-3	Aniline	ND	240	
120-12-7	Anthracene	**320**	240	

140-57-8	Aramite	ND	490
103-33-3	Azobenzene	ND	240
92-87-5	Benzidine	ND	240
56-55-3	Benzo(a)anthracene	ND	240
50-32-8	Benzo(a)pyrene	**430**	240
205-99-2	Benzo(b)fluoranthene	ND	240
191-24-2	Benzo(g,h,i)perylene	ND	240
207-08-9	Benzo(k)fluoranthene	ND	240
65-85-0	Benzoic acid	ND	490
100-51-6	Benzyl alcohol	ND	240
111-44-4	Bis(2-Chloroethyl)ether	ND	240
117-81-7	Bis(2-ethylhexyl)phthalate	**670**	240
85-68-7	Butylbenzylphthalate	ND	240
86-74-8	Carbazole	ND	240
510-15-6	Chlorobenzilate	ND	240
218-01-9	Chrysene	**500**	240
84-74-2	Di-n-butylphthalate	**510**	240
117-84-0	Di-n-octyl phthalate	ND	240
53-70-3	Dibenz(a,h)anthracene	**280**	240
132-64-9	Dibenzofuran	**290**	240
84-66-2	Diethylphthalate	ND	240
131-11-3	Dimethyl phthalate	**830**	240
88-85-7	Dinoseb	ND	490
62-50-0	Ethyl methanesulfonate	ND	240
206-44-0	Fluoranthene	**630**	240
86-73-7	Fluorene	ND	240
118-74-1	Hexachlorobenzene	ND	240
87-68-3	Hexachlorobutadiene	**450**	240
77-47-4	Hexachlorocyclopentadiene	ND	240
67-72-1	Hexachloroethane	ND	240
1888-71-7	Hexachloropropene	ND	240
193-39-5	Indeno(1,2,3-cd)pyrene	**480**	240
465-73-6	Isodrin	ND	240
78-59-1	Isophorone	ND	240
120-58-1	Isosafrole	ND	240
143-50-0	Kepone	ND	240
66-27-3	Methyl methanesulfonate	ND	240
86-30-6	N-Nitrosodiphenylamine	ND	240
621-64-7	N-nitroso-di-n-propylamine	ND	240
62-75-9	N-nitrosodimethylamine	ND	240
91-20-3	Naphthalene	ND	240
98-95-3	Nitrobenzene	ND	240
608-93-5	Pentachlorobenzene	ND	240
82-68-8	Pentachloronitrobenzene	ND	240
87-86-5	Pentachlorophenol	**550**	970
62-44-2	Phenacetin	ND	240
85-01-8	Phenanthrene	**710**	240
108-95-2	Phenol	ND	240
129-00-0	Pyrene	**580**	240
110-86-1	Pyridine	ND	240
94-59-7	Safrole	ND	240
111-91-1	bis(-2-Chloroethoxy)methane	ND	240

Surrogate Compounds	Recoveries (%)	QC Ranges
2-Fluorophenol (SS1)	33	22 - 97
Phenol-d6 (SS2)	33	23 - 99
Nitrobenzene-d5 (SS3)	47	20 - 98
2-Fluorobiphenyl (SS4)	50	23 - 104
2,4,6-Tribromophenol (SS5)	30	12 - 127
p-Terphenyl-d14 (SS6)	55	23 - 120

Comments: The following compounds did not meet the initial calibration criterion of %RSD<20 so they are quantitated using a first order linear regression, the RL for these compounds is 5.0 ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0 ppb.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

BNA MATRIX SPIKE (MS) RESULTS

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28347

PARAMETER	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC	QC LIMITS (% REC)
1,2,4,5-Tetrachlorobenzene	3600	ND	2400	67	47 - 97
1,2,4-Trichlorobenzene	3600	ND	2400	67	46 - 95
1,2-Dichlorobenzene	3600	ND	2200	62	42 - 90
1,3-Dichlorobenzene	3600	ND	2200	62	41 - 86
1,3-Dinitrobenzene	3600	ND	3200	90	36 - 117
1,4-Dichlorobenzene	3600	ND	2200	62	41 - 86
1,4-Naphthoquinone	3600	ND	2600	73	10 - 123
1-Methylnaphthalene	3600	ND	2500	70	49 - 99
2,2'-oxybis(1-chloropropane)	3600	ND	2400	67	35 - 117
2,3,4,6-Tetrachlorophenol	3600	ND	2900	81	7.7 - 168
2,4,5-Trichlorophenol	3600	ND	2800	79	54 - 103
2,4,6-Trichlorophenol	3600	ND	2700	76	33 - 119
2,4-Dichlorophenol	3600	ND	2700	76	42 - 107
2,4-Dinitrophenol	3600	ND	1600	45	10 - 114
2,4-Dinitrotoluene	3600	ND	3000	84	29 - 129
2,4-dimethylphenol	3600	ND	2800	79	35 - 105
2,6-Dichlorophenol	3600	ND	2600	73	28 - 114
2,6-Dinitrotoluene	3600	ND	2900	81	57 - 105
2-Chloronaphthalene	3600	ND	2500	70	45 - 108
2-Chlorophenol	3600	ND	2500	70	41 - 102
2-Methylnaphthalene	3600	ND	2600	73	43 - 101
2-Methylphenol	3600	ND	2700	76	45 - 102
2-Nitroaniline	3600	ND	2800	79	40 - 142
2-Nitrophenol	3600	ND	2600	73	48 - 99
3&4-Methylphenol	7100	ND	5500	77	10 - 154
3,3'-Dichlorobenzidine	3600	ND	2600	73	10 - 137
3-Methylcholanthrene	3600	ND	ND	ND	25 - 123
3-Nitroaniline	3600	ND	2500	70	30 - 114
4,6-Dinitro-2-methylphenol	3600	ND	2300	65	10 - 115
4-Bromophenyl-phenylether	3600	ND	2700	76	48 - 116
4-Chloro-3-methylphenol	3600	ND	3000	84	43 - 112
4-Chloroaniline	3600	ND	1900	53	17 - 94
4-Chlorophenyl-phenylether	3600	ND	2700	76	52 - 103
4-Nitroaniline	3600	ND	2800	79	17 - 117
4-Nitrophenol	3600	ND	3000	84	17 - 141
4-nitroquinoline-1-oxide	3600	ND	2500	70	4.4 - 101
Acenaphthene	3600	ND	2600	73	53 - 101
Acenaphthylene	3600	ND	2600	73	56 - 99
Acetophenone	3600	ND	2600	73	46 - 101
Aniline	3600	ND	1900	53	10 - 90
Anthracene	3600	ND	2800	79	58 - 108
Aramite	3600	ND	3000	84	39 - 118
Azobenzene	3600	ND	2600	73	53 - 117
Benzidine	3600	ND	560	16	10 - 41
Benzo(a)anthracene	3600	ND	2800	79	50 - 112
Benzo(a)pyrene	3600	ND	3000	84	34 - 122
Benzo(b)fluoranthene	3600	ND	2700	76	42 - 120
Benzo(g,h,i)perylene	3600	ND	2800	79	50 - 108
Benzo(k)fluoranthene	3600	ND	2800	79	33 - 116
Benzoic acid	3600	ND	1500	42	10 - 168

Benzyl alcohol	3600	ND	2700	76	18 - 131
Bis(2-Chloroethyl)ether	3600	ND	2400	67	45 - 98
Bis(2-ethylhexyl)phthalate	3600	ND	3000	84	22 - 151
Butylbenzylphthalate	3600	ND	3100	87	56 - 120
Carbazole	3600	ND	2700	76	52 - 114
Chlorobenzilate	3600	ND	3000	84	50 - 129
Chrysene	3600	ND	2600	73	43 - 111
Di-n-butylphthalate	3600	ND	3000	84	57 - 125
Di-n-octyl phthalate	3600	ND	3100	87	39 - 128
Dibenz(a,h)anthracene	3600	ND	2900	81	31 - 129
Dibenzofuran	3600	ND	2600	73	53 - 100
Diethylphthalate	3600	ND	2900	81	54 - 106
Dimethyl phthalate	3600	ND	2900	81	54 - 104
Dinoseb	3600	ND	2600	73	6.4 - 114
Ethyl methanesulfonate	3600	ND	2600	73	46 - 100
Fluoranthene	3600	ND	2900	81	43 - 126
Fluorene	3600	ND	2700	76	57 - 103
Hexachlorobenzene	3600	ND	2600	73	46 - 113
Hexachlorobutadiene	3600	ND	2400	67	44 - 93
Hexachlorocyclopentadiene	3600	ND	1100	31	10 - 115
Hexachloroethane	3600	ND	2200	62	36 - 88
Hexachloropropene	3600	ND	2200	62	10 - 112
Indeno(1,2,3-cd)pyrene	3600	ND	2900	81	29 - 131
Isodrin	3600	ND	1400	39	6.7 - 141
Isophorone	3600	ND	2600	73	52 - 108
Isosafrole	3600	ND	2600	73	49 - 97
Kepone	3600	ND	ND	ND	10 - 126
Methyl methanesulfonate	3600	ND	2400	67	15 - 112
N-Nitrosodiphenylamine	3600	ND	2600	73	50 - 107
N-nitroso-di-n-propylamine	3600	ND	2500	70	45 - 108
N-nitrosodimethylamine	3600	ND	2100	59	34 - 90
Naphthalene	3600	ND	2400	67	43 - 100
Nitrobenzene	3600	ND	2500	70	46 - 103
Pentachlorobenzene	3600	ND	2500	70	50 - 101
Pentachloronitrobenzene	3600	ND	2900	81	51 - 119
Pentachlorophenol	3600	ND	2600	73	6.2 - 128
Phenacetin	3600	ND	3000	84	54 - 124
Phenanthrene	3600	ND	2600	73	47 - 119
Phenol	3600	ND	2600	73	48 - 97
Pyrene	3600	ND	2700	76	49 - 117
Pyridine	3600	ND	1500	42	14 - 67
Safrole	3600	ND	2300	65	49 - 103
bis(-2-Chloroethoxy)methane	3600	ND	2500	70	47 - 102

Comments:

Laboratory Duplicate Results

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28347

PARAMETER	SAMPLE RESULT ug/Kg	SAMPLE DUPLICATE RESULT ug/Kg	PRECISION RPD %	QC LIMITS
1,2,4,5-Tetrachlorobenzene	ND	ND	NC	50
1,2,4-Trichlorobenzene	ND	ND	NC	50
1,2-Dichlorobenzene	ND	ND	NC	50
1,3-Dichlorobenzene	ND	ND	NC	50
1,3-Dinitrobenzene	ND	ND	NC	50
1,4-Dichlorobenzene	ND	ND	NC	50
1,4-Naphthoquinone	ND	ND	NC	50
1-Methylnaphthalene	ND	ND	NC	50
2,2'-oxybis(1-chloropropane)	ND	ND	NC	50
2,3,4,6-Tetrachlorophenol	ND	ND	NC	50
2,4,5-Trichlorophenol	ND	ND	NC	50
2,4,6-Trichlorophenol	ND	ND	NC	50
2,4-Dichlorophenol	ND	ND	NC	50
2,4-Dinitrophenol	ND	ND	NC	50
2,4-Dinitrotoluene	ND	ND	NC	50
2,4-dimethylphenol	ND	ND	NC	50
2,6-Dichlorophenol	ND	ND	NC	50
2,6-Dinitrotoluene	ND	ND	NC	50
2-Chloronaphthalene	ND	ND	NC	50
2-Chlorophenol	ND	ND	NC	50
2-Methylnaphthalene	ND	ND	NC	50
2-Methylphenol	ND	ND	NC	50
2-Nitroaniline	ND	ND	NC	50
2-Nitrophenol	ND	ND	NC	50
3&4-Methylphenol	ND	ND	NC	50
3,3'-Dichlorobenzidine	ND	ND	NC	50
3-Methylcholanthrene	ND	ND	NC	50
3-Nitroaniline	ND	ND	NC	50
4,6-Dinitro-2-methylphenol	ND	ND	NC	50
4-Bromophenyl-phenylether	ND	ND	NC	50
4-Chloro-3-methylphenol	ND	ND	NC	50
4-Chloroaniline	ND	ND	NC	50
4-Chlorophenyl-phenylether	ND	ND	NC	50
4-Nitroaniline	ND	ND	NC	50
4-Nitrophenol	ND	ND	NC	50
4-nitroquinoline-1-oxide	ND	ND	NC	50
Acenaphthene	ND	ND	NC	50
Acenaphthylene	ND	ND	NC	50
Acetophenone	ND	ND	NC	50
Aniline	ND	ND	NC	50
Anthracene	ND	ND	NC	50
Aramite	ND	ND	NC	50
Azobenzene	ND	ND	NC	50
Benzidine	ND	ND	NC	50
Benzo(a)anthracene	ND	ND	NC	50
Benzo(a)pyrene	ND	ND	NC	50
Benzo(b)fluoranthene	ND	ND	NC	50
Benzo(g,h,i)perylene	ND	ND	NC	50
Benzo(k)fluoranthene	ND	ND	NC	50
Benzoic acid	ND	ND	NC	50
Benzyl alcohol	ND	ND	NC	50
Bis(2-Chloroethyl)ether	ND	ND	NC	50
Bis(2-ethylhexyl)phthalate	ND	ND	NC	50
Butylbenzylphthalate	ND	ND	NC	50
Carbazole	ND	ND	NC	50

Chlorobenzilate	ND	ND	NC	50
Chrysene	ND	ND	NC	50
Di-n-butylphthalate	ND	ND	NC	50
Di-n-octyl phthalate	ND	ND	NC	50
Dibenz(a,h)anthracene	ND	ND	NC	50
Dibenzofuran	ND	ND	NC	50
Diethylphthalate	ND	ND	NC	50
Dimethyl phthalate	ND	ND	NC	50
Dinoseb	ND	ND	NC	50
Ethyl methanesulfonate	ND	ND	NC	52
Fluoranthene	ND	ND	NC	50
Fluorene	ND	ND	NC	50
Hexachlorobenzene	ND	ND	NC	50
Hexachlorobutadiene	ND	ND	NC	50
Hexachlorocyclopentadiene	ND	ND	NC	50
Hexachloroethane	ND	ND	NC	50
Hexachloropropene	ND	ND	NC	50
Indeno(1,2,3-cd)pyrene	ND	ND	NC	50
Isodrin	ND	ND	NC	50
Isophorone	ND	ND	NC	50
Isosafrole	ND	ND	NC	50
Kepone	ND	ND	NC	50
Methyl methanesulfonate	ND	ND	NC	50
N-Nitrosodiphenylamine	ND	ND	NC	50
N-nitroso-di-n-propylamine	ND	ND	NC	50
N-nitrosodimethylamine	ND	ND	NC	50
Naphthalene	ND	ND	NC	50
Nitrobenzene	ND	ND	NC	50
Pentachlorobenzene	ND	ND	NC	50
Pentachloronitrobenzene	ND	ND	NC	50
Pentachlorophenol	ND	ND	NC	50
Phenacetin	ND	ND	NC	50
Phenanthrene	ND	ND	NC	50
Phenol	ND	ND	NC	50
Pyrene	ND	ND	NC	50
Pyridine	ND	ND	NC	50
Safrole	ND	ND	NC	50
bis(-2-Chloroethoxy)methane	ND	ND	NC	50

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Fortified Blank (LFB) Results

Henry's Dry Cleaners - Laconia, NH

PARAMETER	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
1,2,4,5-Tetrachlorobenzene	3516	2180	62	41 - 113
1,2,4-Trichlorobenzene	3516	2140	61	39 - 111
1,2-Dichlorobenzene	3516	2050	58	36 - 106
1,3-Dichlorobenzene	3516	2020	58	35 - 103
1,3-Dinitrobenzene	3516	3060	87	26 - 138
1,4-Dichlorobenzene	3516	2030	58	35 - 103
1,4-Naphthoquinone	3516	2590	74	37 - 134
1-Methylnaphthalene	3516	2200	63	41 - 117
2,2'-oxybis(1-chloropropane)	3516	2200	63	30 - 134
2,3,4,6-Tetrachlorophenol	3516	2520	72	16 - 153
2,4,5-Trichlorophenol	3516	2470	70	38 - 122
2,4,6-Trichlorophenol	3516	2370	67	39 - 121
2,4-Dichlorophenol	3516	2250	64	40 - 118
2,4-Dinitrophenol	3516	911	26	10 - 71
2,4-Dinitrotoluene	3516	2710	77	47 - 127
2,4-dimethylphenol	3516	2120	60	30 - 120
2,6-Dichlorophenol	3516	2260	64	40 - 116
2,6-Dinitrotoluene	3516	2620	75	46 - 128
2-Chloronaphthalene	3516	2220	63	42 - 125
2-Chlorophenol	3516	2230	63	41 - 115
2-Methylnaphthalene	3516	2260	64	35 - 120
2-Methylphenol	3516	2320	66	40 - 119
2-Nitroaniline	3516	2500	71	29 - 163
2-Nitrophenol	3516	2190	62	35 - 115
3&4-Methylphenol	7032	4840	69	3.5 - 149
3,3'-Dichlorobenzidine	3516	1670	48	29 - 114
3-Methylcholanthrene	3516	0	ND	40 - 126
3-Nitroaniline	3516	1970	56	44 - 120
4,6-Dinitro-2-methylphenol	3516	1590	45	10 - 97
4-Bromophenyl-phenylether	3516	2340	67	40 - 133
4-Chloro-3-methylphenol	3516	2550	73	36 - 133
4-Chloroaniline	3516	1210	34	28 - 99
4-Chlorophenyl-phenylether	3516	2370	67	45 - 119
4-Nitroaniline	3516	2500	71	37 - 131
4-Nitrophenol	3516	2630	75	15 - 141
4-nitroquinoline-1-oxide	3516	2390	68	19 - 118
Acenaphthene	3516	2290	65	44 - 119
Acenaphthylene	3516	2330	66	44 - 121
Acetophenone	3516	2360	67	41 - 115
Aniline	3516	1430	41	20 - 99
Anthracene	3516	2520	72	40 - 137
Aramite	3516	2590	74	37 - 118
Azobenzene	3516	2370	67	41 - 141
Benzidine	3516	513	15	2 - 76
Benzo(a)anthracene	3516	2400	68	46 - 128
Benzo(a)pyrene	3516	2560	73	49 - 124
Benzo(b)fluoranthene	3516	2440	69	41 - 135
Benzo(g,h,i)perylene	3516	2410	69	47 - 123
Benzo(k)fluoranthene	3516	2390	68	50 - 114
Benzoic acid	3516	0	ND	10 - 122

Benzyl alcohol	3516	2310	66	28 - 129
Bis(2-Chloroethyl)ether	3516	2160	61	40 - 112
Bis(2-ethylhexyl)phthalate	3516	2680	76	38 - 143
Butylbenzylphthalate	3516	2730	78	40 - 143
Carbazole	3516	2400	68	42 - 133
Chlorobenzilate	3516	2580	73	45 - 139
Chrysene	3516	2260	64	47 - 118
Di-n-butylphthalate	3516	2780	79	33 - 183
Di-n-octyl phthalate	3516	2800	80	44 - 125
Dibenz(a,h)anthracene	3516	2480	71	47 - 128
Dibenzofuran	3516	2360	67	44 - 118
Diethylphthalate	3516	2620	75	44 - 132
Dimethyl phthalate	3516	2590	74	46 - 121
Dinoseb	3516	2220	63	10 - 118
Ethyl methanesulfonate	3516	2330	66	41 - 117
Fluoranthene	3516	2610	74	42 - 135
Fluorene	3516	2430	69	47 - 122
Hexachlorobenzene	3516	2270	65	38 - 133
Hexachlorobutadiene	3516	2130	61	40 - 108
Hexachlorocyclopentadiene	3516	2040	58	18 - 130
Hexachloroethane	3516	2020	58	34 - 106
Hexachloropropene	3516	2120	60	31 - 115
Indeno(1,2,3-cd)pyrene	3516	2460	70	46 - 127
Isodrin	3516	2500	71	43 - 137
Isophorone	3516	2330	66	45 - 125
Isosafrole	3516	2310	66	41 - 115
Kepone	3516	1180	34	12 - 101
Methyl methanesulfonate	3516	2260	64	6.3 - 136
N-Nitrosodiphenylamine	3516	2290	65	30 - 148
N-nitroso-di-n-propylamine	3516	2290	65	41 - 122
N-nitrosodimethylamine	3516	1890	54	28 - 107
Naphthalene	3516	2200	63	38 - 118
Nitrobenzene	3516	2250	64	40 - 119
Pentachlorobenzene	3516	2290	65	44 - 116
Pentachloronitrobenzene	3516	2540	72	39 - 139
Pentachlorophenol	3516	2360	67	10 - 117
Phenacetin	3516	2790	79	39 - 146
Phenanthrene	3516	2350	67	39 - 134
Phenol	3516	2340	67	39 - 121
Pyrene	3516	2350	67	45 - 130
Pyridine	3516	1360	39	22 - 77
Safrole	3516	2040	58	45 - 119
bis(-2-Chloroethoxy)methane	3516	2260	64	40 - 119

Comments: 3-methylcholanthrene is not present in the LFB/MS spiking solution.
Benzoic acid was not detected in LFB.

Samples in Batch AB28339, AB28340, AB28341, AB28343, AB28345, AB28347, AB28348, AB28350, AB28354, AB28359

 PN: 12030029

USEPA Region 1

START III

CHAIN OF CUSTODY RECORD

Henry's Dry Cleaners

Contact Name: Janis Tsang

Contact Phone: 617-413-5053

No: 1-033012-120240-0007

Site #: R01-120316TJ

Lab: NERL/OEME

Lab Contact: Doris Guzman

Lab #	Sample #	Location	Analyses	Collected	Sample Time	Matrix	Numb Cont	Container	Preservative	Sample_Remarks	MS/MSD
	R01-120314JT-0025	MIP 14 (14-15)	SVOCs	3/29/2012	09:25	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0029	MIP 30 (6-7)	SVOCs	3/27/2012	16:05	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0031	MIP 30 (18-19)	SVOCs	3/27/2012	16:45	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0032	MIP 30 (20-21)	VOCs	3/27/2012	16:55	Soil	1	40 mL vial	MeOH	8.69 g	
	R01-120314JT-0036	MIP 17 (8-9)	SVOCs	3/28/2012	09:00	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0040	MIP 17 (23-24)	VOCs	3/28/2012	10:00	Soil	1	40 mL vial	MeOH	7.09 g	
	R01-120314JT-0050	SB-31 (2-3)	SVOCs	3/28/2012	14:50	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0054	SB-31 (17-17.5)	VOCs	3/28/2012	15:25	Soil	1	40 mL vial	MeOH	10.64 g	
	R01-120314JT-0057	MIP 24 (12-13)	SVOCs	3/28/2012	16:20	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0060	MIP 24 (8-9)	SVOCs	3/28/2012	16:10	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0063	MB-01	VOCs	3/28/2012	07:40	Methanol Blank	1	40 mL vial	MeOH		

Special Instructions:	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	BWC	3/30/12	[illegible]	3/30/12	15:46						

PN 12030029

USEPA Region 1

START III

CHAIN OF CUSTODY RECORD

Henry's Dry Cleaners

Contact Name: Janis Tsang

Contact Phone: 617-413-5053

No: 1-033012-120240-0007

Site #: R01-120316TJ

Lab: NERL/OEME

Lab Contact: Doris Guzman

Lab #	Sample #	Location	Analyses	Collected	Sample Time	Matrix	Numb Cont	Container	Preservative	Sample_Remarks	MS/MSD
	R01-120314JT-0065	MIP 4 (3-4)	SVOCs	3/29/2012	10:45	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0067	MIP 4 (10-11)	VOCs	3/29/2012	11:05	Soil	1	40 mL vial	MeOH	6.51	
	R01-120314JT-0068	MIP 4 (13-14) A	VOCs	3/29/2012	11:15	Soil	1	40 mL vial	MeOH	9.86	
	R01-120314JT-0074	MIP 4 (23-24)	VOCs	3/29/2012	13:00	Soil	1	40 mL vial	MeOH	9.12 g	
	R01-120314JT-0075	MIP 4 (23-24)	SVOCs	3/29/2012	13:05	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0084	MIP 3 (16-17)	VOCs	3/29/2012	16:25	Soil	1	40 mL vial	MeOH	5.21 g	
	R01-120314JT-0086	MIP 3 (18-19)	VOCs	3/29/2012	17:35	Soil	1	40 mL vial	MeOH	10.09 g	
	R01-120314JT-0093	MIP 16 (22-23)	VOCs	3/30/2012	09:55	Soil	1	40 mL vial	MeOH	9.11	
	R01-120314JT-0099	PE-MLV0051	VOCs	3/30/2012	07:30	PE	1	2 oz Ampule	4 C		
	R01-120314JT-0100	PE-SS2067	SVOCs	3/30/2012	07:30	PE	1	2 oz Amber	4 C		
	R01-120314JT-0101	MIP 16 (31-32)	VOCs	3/30/2012	10:55	Soil	1	40 mL vial	MeOH	9.54 g	

Special Instructions:

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	[illegible]	3/30/12	[illegible]	3/30/12	15:46						

Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

March 28, 2012

Janis Tsang - mail Code OSRR02-2
US EPA New England R1

Project Number: 12030018
Project: Henry's Dry Cleaners - Laconia, NH
Analysis: BNAs in Water
Analyst: Bhavita Patel

B.P. 3/28/2012

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-BNAW2.

Samples were prepared using separatory funnel liquid-liquid extraction. The samples were analyzed using high resolution capillary column chromatography and quadrapole mass spectrometry (GC/MS). The SOP for this method is based on the US EPA SW-846 Methods 3510C, 8270C, Method 625, and EIASOP-BNAGCMS7.

Date Samples Received by the Laboratory: 03/23/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Daniel N. Boudreau 4/4/12
Daniel N. Boudreau
Chemistry Team Leader

Qualifiers:

RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
NC = Not calculated since analyte concentration is ND.
J = Estimated value
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 5 times the concentration in the blank.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Water

Client Sample ID:	R01-120314JT-0015	Lab Sample ID:	AB28177
Date of Collection:	3/22/2012	Matrix	GW
Date of Extraction:	3/27/12	Volume Extracted:	1000 mL
Date of Analysis:	3/27/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	
95-50-1	1,2-Dichlorobenzene	ND	2.5	
541-73-1	1,3-Dichlorobenzene	ND	2.5	
99-65-0	1,3-Dinitrobenzene	ND	2.5	
106-46-7	1,4-Dichlorobenzene	ND	2.5	
130-15-4	1,4-Naphthoquinone	ND	2.5	
90-12-0	1-Methylnaphthalene	ND	2.5	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	2.5	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2.5	
95-95-4	2,4,5-Trichlorophenol	ND	2.5	
88-06-2	2,4,6-Trichlorophenol	ND	2.5	
120-83-2	2,4-Dichlorophenol	ND	2.5	
51-28-5	2,4-Dinitrophenol	ND	10.0	
121-14-2	2,4-Dinitrotoluene	ND	2.5	
105-67-9	2,4-dimethylphenol	ND	2.5	
87-65-0	2,6-Dichlorophenol	ND	2.5	
606-20-2	2,6-Dinitrotoluene	ND	2.5	
91-58-7	2-Chloronaphthalene	ND	2.5	
95-57-8	2-Chlorophenol	ND	2.5	
91-57-6	2-Methylnaphthalene	ND	2.5	
95-48-7	2-Methylphenol	ND	2.5	
88-74-4	2-Nitroaniline	ND	2.5	
88-75-5	2-Nitrophenol	ND	2.5	
108-39-4/106-44-	3&4-Methylphenol	ND	5.0	
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	
56-49-5	3-Methylcholanthrene	ND	2.5	
99-09-2	3-Nitroaniline	ND	2.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND	5.0	
101-55-3	4-Bromophenyl-phenylether	ND	2.5	
59-50-7	4-Chloro-3-methylphenol	ND	2.5	
106-47-8	4-Chloroaniline	ND	2.5	
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	
100-01-6	4-Nitroaniline	ND	2.5	
100-02-7	4-Nitrophenol	ND	5.0	
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	
83-32-9	Acenaphthene	ND	2.5	
208-96-8	Acenaphthylene	ND	2.5	
98-86-2	Acetophenone	ND	2.5	
62-53-3	Aniline	ND	2.5	
120-12-7	Anthracene	ND	2.5	
140-57-8	Aramite	ND	2.5	

103-33-3	Azobenzene	ND	2.5
92-87-5	Benzidine	ND	2.5
56-55-3	Benzo(a)anthracene	ND	2.5
50-32-8	Benzo(a)pyrene	ND	2.5
205-99-2	Benzo(b)fluoranthene	ND	2.5
191-24-2	Benzo(g,h,i)perylene	ND	2.5
207-08-9	Benzo(k)fluoranthene	ND	2.5
65-85-0	Benzoic acid	ND	5.0
100-51-6	Benzyl alcohol	ND	2.5
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5
85-68-7	Butylbenzylphthalate	ND	2.5
86-74-8	Carbazole	ND	2.5
510-15-6	Chlorobenzilate	ND	2.5
218-01-9	Chrysene	ND	2.5
84-74-2	Di-n-butylphthalate	ND	2.5
117-84-0	Di-n-octyl phthalate	ND	2.5
53-70-3	Dibenz(a,h)anthracene	ND	2.5
132-64-9	Dibenzofuran	ND	2.5
84-66-2	Diethylphthalate	**2.5**	2.5
131-11-3	Dimethyl phthalate	ND	2.5
88-85-7	Dinoseb	ND	5.0
62-50-0	Ethyl methanesulfonate	ND	2.5
206-44-0	Fluoranthene	ND	2.5
86-73-7	Fluorene	ND	2.5
118-74-1	Hexachlorobenzene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
77-47-4	Hexachlorocyclopentadiene	ND	2.5
67-72-1	Hexachloroethane	ND	2.5
1888-71-7	Hexachloropropene	ND	2.5
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5
465-73-6	Isodrin	ND	2.5
78-59-1	Isophorone	ND	2.5
120-58-1	Isosafrole	ND	2.5
143-50-0	Kepone	ND	5.0
66-27-3	Methyl methanesulfonate	ND	2.5
86-30-6	N-Nitrosodiphenylamine	ND	2.5
621-64-7	N-nitroso-di-n-propylamine	ND	2.5
62-75-9	N-nitrosodimethylamine	ND	2.5
91-20-3	Naphthalene	ND	2.5
98-95-3	Nitrobenzene	ND	2.5
608-93-5	Pentachlorobenzene	ND	2.5
82-68-8	Pentachloronitrobenzene	ND	2.5
87-86-5	Pentachlorophenol	ND	5.0
62-44-2	Phenacetin	ND	2.5
85-01-8	Phenanthrene	ND	2.5
108-95-2	Phenol	ND	2.5
129-00-0	Pyrene	ND	2.5
110-86-1	Pyridine	ND	2.5
94-59-7	Safrole	ND	2.5
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2-Fluorophenol (SS1)	23	12 - 74
Phenol-d6 (SS2)	15	6 - 52
Nitrobenzene-d5 (SS3)	64	32 - 114
2-Fluorobiphenyl (SS4)	71	33 - 119
2,4,6-Tribromophenol (SS5)	37	30 - 144
p-Terphenyl-d14 (SS6)	78	40 - 132

Comments: The following compounds did not meet the criterion of % RSD <20 so they are quantified using a first order linear regression, the RL for these compounds is 5.0ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL's for 2,4-dinitrophenol and 4-nitroquinoline-1-oxide is 10.0ppb.

Recoveries for LFB are outside of QC criterion.

Tentatively Identified Non-Target Compounds

1. Tetrachloroethylene 350ppb J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

Laboratory Blank Results

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	GW
Date of Extraction:	3/27/12	Volume Extracted:	1000 mL
Date of Analysis:	3/27/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
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130-15-4	1,4-Naphthoquinone	ND	2.5	
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88-06-2	2,4,6-Trichlorophenol	ND	2.5	
120-83-2	2,4-Dichlorophenol	ND	2.5	
51-28-5	2,4-Dinitrophenol	ND	10.0	
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95-57-8	2-Chlorophenol	ND	2.5	
91-57-6	2-Methylnaphthalene	ND	2.5	
95-48-7	2-Methylphenol	ND	2.5	
88-74-4	2-Nitroaniline	ND	2.5	
88-75-5	2-Nitrophenol	ND	2.5	
108-39-4/106-44-.	3&4-Methylphenol	ND	5.0	
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106-47-8	4-Chloroaniline	ND	2.5	
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	
100-01-6	4-Nitroaniline	ND	2.5	
100-02-7	4-Nitrophenol	ND	5.0	
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	
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208-96-8	Acenaphthylene	ND	2.5	
98-86-2	Acetophenone	ND	2.5	
62-53-3	Aniline	ND	2.5	
120-12-7	Anthracene	ND	2.5	
140-57-8	Aramite	ND	2.5	

103-33-3	Azobenzene	ND	2.5
92-87-5	Benzidine	ND	2.5
56-55-3	Benzo(a)anthracene	ND	2.5
50-32-8	Benzo(a)pyrene	ND	2.5
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207-08-9	Benzo(k)fluoranthene	ND	2.5
65-85-0	Benzoic acid	ND	5.0
100-51-6	Benzyl alcohol	ND	2.5
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5
85-68-7	Butylbenzylphthalate	ND	2.5
86-74-8	Carbazole	ND	2.5
510-15-6	Chlorobenzilate	ND	2.5
218-01-9	Chrysene	ND	2.5
84-74-2	Di-n-butylphthalate	ND	2.5
117-84-0	Di-n-octyl phthalate	ND	2.5
53-70-3	Dibenz(a,h)anthracene	ND	2.5
132-64-9	Dibenzofuran	ND	2.5
84-66-2	Diethylphthalate	ND	2.5
131-11-3	Dimethyl phthalate	ND	2.5
88-85-7	Dinoseb	ND	5.0
62-50-0	Ethyl methanesulfonate	ND	2.5
206-44-0	Fluoranthene	ND	2.5
86-73-7	Fluorene	ND	2.5
118-74-1	Hexachlorobenzene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
77-47-4	Hexachlorocyclopentadiene	ND	2.5
67-72-1	Hexachloroethane	ND	2.5
1888-71-7	Hexachloropropene	ND	2.5
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5
465-73-6	Isodrin	ND	2.5
78-59-1	Isophorone	ND	2.5
120-58-1	Isosafrole	ND	2.5
143-50-0	Kepone	ND	5.0
66-27-3	Methyl methanesulfonate	ND	2.5
86-30-6	N-Nitrosodiphenylamine	ND	2.5
621-64-7	N-nitroso-di-n-propylamine	ND	2.5
62-75-9	N-nitrosodimethylamine	ND	2.5
91-20-3	Naphthalene	ND	2.5
98-95-3	Nitrobenzene	ND	2.5
608-93-5	Pentachlorobenzene	ND	2.5
82-68-8	Pentachloronitrobenzene	ND	2.5
87-86-5	Pentachlorophenol	ND	5.0
62-44-2	Phenacetin	ND	2.5
85-01-8	Phenanthrene	ND	2.5
108-95-2	Phenol	ND	2.5
129-00-0	Pyrene	ND	2.5
110-86-1	Pyridine	ND	2.5
94-59-7	Safrole	ND	2.5
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2,4,6-Tribromophenol (SS5)	42	34 - 122
2-Fluorobiphenyl (SS4)	69	46 - 112
2-Fluorophenol (SS1)	28	23 - 74
Nitrobenzene-d5 (SS3)	64	33 - 122
Phenol-d6 (SS2)	18	13 - 53
p-Terphenyl-d14 (SS6)	86	52 - 126

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Water

Client Sample ID:	R01-120314JT-0018	Lab Sample ID:	AB28178
Date of Collection:	3/22/2012	Matrix	GW
Date of Extraction:	3/27/12	Volume Extracted:	1000 mL
Date of Analysis:	3/27/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	
95-50-1	1,2-Dichlorobenzene	ND	2.5	
541-73-1	1,3-Dichlorobenzene	ND	2.5	
99-65-0	1,3-Dinitrobenzene	ND	2.5	
106-46-7	1,4-Dichlorobenzene	ND	2.5	
130-15-4	1,4-Naphthoquinone	ND	2.5	
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120-83-2	2,4-Dichlorophenol	ND	2.5	
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87-65-0	2,6-Dichlorophenol	ND	2.5	
606-20-2	2,6-Dinitrotoluene	ND	2.5	
91-58-7	2-Chloronaphthalene	ND	2.5	
95-57-8	2-Chlorophenol	ND	2.5	
91-57-6	2-Methylnaphthalene	ND	2.5	
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88-74-4	2-Nitroaniline	ND	2.5	
88-75-5	2-Nitrophenol	ND	2.5	
108-39-4/106-44-.	3&4-Methylphenol	ND	5.0	
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	
56-49-5	3-Methylcholanthrene	ND	2.5	
99-09-2	3-Nitroaniline	ND	2.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND	5.0	
101-55-3	4-Bromophenyl-phenylether	ND	2.5	
59-50-7	4-Chloro-3-methylphenol	ND	2.5	
106-47-8	4-Chloroaniline	ND	2.5	
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	
100-01-6	4-Nitroaniline	ND	2.5	
100-02-7	4-Nitrophenol	ND	5.0	
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	
83-32-9	Acenaphthene	ND	2.5	
208-96-8	Acenaphthylene	ND	2.5	
98-86-2	Acetophenone	ND	2.5	
62-53-3	Aniline	ND	2.5	
120-12-7	Anthracene	ND	2.5	
140-57-8	Aramite	ND	2.5	

103-33-3	Azobenzene	ND	2.5
92-87-5	Benzidine	ND	2.5
56-55-3	Benzo(a)anthracene	ND	2.5
50-32-8	Benzo(a)pyrene	ND	2.5
205-99-2	Benzo(b)fluoranthene	ND	2.5
191-24-2	Benzo(g,h,i)perylene	ND	2.5
207-08-9	Benzo(k)fluoranthene	ND	2.5
65-85-0	Benzoic acid	ND	5.0
100-51-6	Benzyl alcohol	ND	2.5
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5
85-68-7	Butylbenzylphthalate	ND	2.5
86-74-8	Carbazole	ND	2.5
510-15-6	Chlorobenzilate	ND	2.5
218-01-9	Chrysene	ND	2.5
84-74-2	Di-n-butylphthalate	ND	2.5
117-84-0	Di-n-octyl phthalate	ND	2.5
53-70-3	Dibenz(a,h)anthracene	ND	2.5
132-64-9	Dibenzofuran	ND	2.5
84-66-2	Diethylphthalate	ND	2.5
131-11-3	Dimethyl phthalate	ND	2.5
88-85-7	Dinoseb	ND	5.0
62-50-0	Ethyl methanesulfonate	ND	2.5
206-44-0	Fluoranthene	ND	2.5
86-73-7	Fluorene	ND	2.5
118-74-1	Hexachlorobenzene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
77-47-4	Hexachlorocyclopentadiene	ND	2.5
67-72-1	Hexachloroethane	ND	2.5
1888-71-7	Hexachloropropene	ND	2.5
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5
465-73-6	Isodrin	ND	2.5
78-59-1	Isophorone	ND	2.5
120-58-1	Isosafrole	ND	2.5
143-50-0	Kepone	ND	5.0
66-27-3	Methyl methanesulfonate	ND	2.5
86-30-6	N-Nitrosodiphenylamine	ND	2.5
621-64-7	N-nitroso-di-n-propylamine	ND	2.5
62-75-9	N-nitrosodimethylamine	ND	2.5
91-20-3	Naphthalene	ND	2.5
98-95-3	Nitrobenzene	ND	2.5
608-93-5	Pentachlorobenzene	ND	2.5
82-68-8	Pentachloronitrobenzene	ND	2.5
87-86-5	Pentachlorophenol	ND	5.0
62-44-2	Phenacetin	ND	2.5
85-01-8	Phenanthrene	ND	2.5
108-95-2	Phenol	ND	2.5
129-00-0	Pyrene	ND	2.5
110-86-1	Pyridine	ND	2.5
94-59-7	Safrole	ND	2.5
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2-Fluorophenol (SS1)	27	12 - 74
Phenol-d6 (SS2)	19	6 - 52
Nitrobenzene-d5 (SS3)	70	32 - 114
2-Fluorobiphenyl (SS4)	78	33 - 119
2,4,6-Tribromophenol (SS5)	62	30 - 144
p-Terphenyl-d14 (SS6)	74	40 - 132

Comments: The following compounds did not meet the criterion of % RSD <20 so they are quantified using a first order linear regression, the RL for these compounds is 5.0ppb; benzoic acid, 4-nitrophenol, 4,6-dinitro-2-methyl phenol, pentachlorophenol, dinoseb, and kepone. The RL's for 2,4-dinitrophenol and 4-nitroquinoline-1-oxide is 10.0ppb.

3-methylcholanthrene is no present in the LFB/MS spiking solution.

The last internal (perylene-d12) is out of spec in this sample/sample spike. The samples were not reanalyzed since the area were artificially elevated due to rise in baseline. Recoveries for matrix spike are within QC specs.

Tentatively Identified Non-Target Compounds

1. Tetrachloroethylene	29.0ppb	J
2. Decahydro-4,4,8,9,10-pentamethylnaphthalene	11.0ppb	J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

BNA MATRIX SPIKE (MS) RESULTS

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28178

PARAMETER	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC	QC LIMITS (% REC)
1,2,4,5-Tetrachlorobenzene	40	ND	29	73	50 - 104
1,2,4-Trichlorobenzene	40	ND	28	69	31 - 106
1,2-Dichlorobenzene	40	ND	26	65	26 - 103
1,3-Dichlorobenzene	40	ND	25	64	20 - 100
1,3-Dinitrobenzene	40	ND	36	91	31 - 152
1,4-Dichlorobenzene	40	ND	25	64	21 - 100
1,4-Naphthoquinone	40	ND	28	71	52 - 110
1-Methylnaphthalene	40	ND	29	71	54 - 110
2,2'-oxybis(1-chloropropane)	40	ND	30	76	43 - 124
2,3,4,6-Tetrachlorophenol	40	ND	36	91	63 - 127
2,4,5-Trichlorophenol	40	ND	38	94	62 - 125
2,4,6-Trichlorophenol	40	ND	36	91	67 - 119
2,4-Dichlorophenol	40	ND	34	85	64 - 113
2,4-Dinitrophenol	40	ND	30	74	28 - 139
2,4-Dinitrotoluene	40	ND	36	90	64 - 131
2,4-dimethylphenol	40	ND	34	86	21 - 123
2,6-Dichlorophenol	40	ND	33	84	63 - 111
2,6-Dinitrotoluene	40	ND	35	88	65 - 127
2-Chloronaphthalene	40	ND	30	75	50 - 120
2-Chlorophenol	40	ND	30	76	57 - 105
2-Methylnaphthalene	40	ND	29	72	53 - 107
2-Methylphenol	40	ND	28	71	47 - 105
2-Nitroaniline	40	ND	35	88	58 - 144
2-Nitrophenol	40	ND	34	86	59 - 124
3&4-Methylphenol	80	ND	54	67	13 - 144
3,3'-Dichlorobenzidine	40	ND	ND	ND	5.0 - 163
3-Methylcholanthrene	40	ND	ND	ND	23 - 166
3-Nitroaniline	40	ND	16	39	45 - 129
4,6-Dinitro-2-methylphenol	40	ND	31	77	45 - 128
4-Bromophenyl-phenylether	40	ND	34	85	63 - 121
4-Chloro-3-methylphenol	40	ND	38	94	65 - 119
4-Chloroaniline	40	ND	10	26	7.8 - 122
4-Chlorophenyl-phenylether	40	ND	32	80	61 - 116
4-Nitroaniline	40	ND	14	36	41 - 139
4-Nitrophenol	40	ND	9.0	23	5.8 - 109
4-nitroquinoline-1-oxide	40	ND	7.5	19	38 - 108
Acenaphthene	40	ND	31	78	61 - 113
Acenaphthylene	40	ND	32	79	62 - 113
Acetophenone	40	ND	32	81	61 - 113
Aniline	40	ND	13	33	17 - 109
Anthracene	40	ND	34	85	68 - 121
Aramite	40	ND	33	83	24 - 158
Azobenzene	40	ND	34	85	60 - 123
Benzidine	40	ND	ND	ND	10 - 80
Benzo(a)anthracene	40	ND	34	85	69 - 119
Benzo(a)pyrene	40	ND	36	90	57 - 132
Benzo(b)fluoranthene	40	ND	37	92	55 - 139
Benzo(g,h,i)perylene	40	ND	21	54	60 - 130
Benzo(k)fluoranthene	40	ND	31	79	62 - 126
Benzoic acid	40	ND	24	60	3.7 - 86

Benzyl alcohol	40	ND	21	51	23 - 133
Bis(2-Chloroethyl)ether	40	ND	31	78	57 - 111
Bis(2-ethylhexyl)phthalate	40	ND	39	98	37 - 155
Butylbenzylphthalate	40	ND	36	90	64 - 133
Carbazole	40	ND	32	79	62 - 128
Chlorobenzilate	40	ND	35	88	55 - 146
Chrysene	40	ND	32	80	71 - 110
Di-n-butylphthalate	40	ND	35	88	68 - 135
Di-n-octyl phthalate	40	ND	39	98	35 - 160
Dibenz(a,h)anthracene	40	ND	26	64	58 - 137
Dibenzofuran	40	ND	31	79	62 - 113
Diethylphthalate	40	ND	34	85	56 - 131
Dimethyl phthalate	40	ND	34	86	64 - 121
Dinoseb	40	ND	30	74	46 - 121
Ethyl methanesulfonate	40	ND	32	80	56 - 117
Fluoranthene	40	ND	34	86	64 - 128
Fluorene	40	ND	32	80	63 - 119
Hexachlorobenzene	40	ND	34	84	62 - 118
Hexachlorobutadiene	40	ND	26	66	9.5 - 107
Hexachlorocyclopentadiene	40	ND	25	62	11 - 117
Hexachloroethane	40	ND	24	61	6.9 - 101
Hexachloropropene	40	ND	26	64	8.1 - 110
Indeno(1,2,3-cd)pyrene	40	ND	26	65	62 - 129
Isodrin	40	ND	30	75	63 - 119
Isophorone	40	ND	33	83	60 - 130
Isosafrole	40	ND	31	78	59 - 112
Kepone	40	ND	8.3	21	8.3 - 117
Methyl methanesulfonate	40	ND	28	70	37 - 98
N-Nitrosodiphenylamine	40	ND	34	86	58 - 117
N-nitroso-di-n-propylamine	40	ND	32	80	58 - 124
N-nitrosodimethylamine	40	ND	21	53	35 - 72
Naphthalene	40	ND	30	75	47 - 110
Nitrobenzene	40	ND	34	85	58 - 115
Pentachlorobenzene	40	ND	31	78	61 - 112
Pentachloronitrobenzene	40	ND	38	94	65 - 127
Pentachlorophenol	40	ND	40	101	11 - 167
Phenacetin	40	ND	ND	ND	55 - 143
Phenanthrene	40	ND	32	81	63 - 122
Phenol	40	ND	16	39	20 - 64
Pyrene	40	ND	29	73	68 - 117
Pyridine	40	ND	4.5	11	5.3 - 85
Safrole	40	ND	30	74	56 - 117
bis(-2-Chloroethoxy)methane	40	ND	33	82	64 - 114

Comments:

Laboratory Duplicate Results

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28177

PARAMETER	SAMPLE RESULT ug/L	SAMPLE DUPLICATE RESULT ug/L	PRECISION RPD %	QC LIMITS
1,2,4,5-Tetrachlorobenzene	ND	ND	ND	50
1,2,4-Trichlorobenzene	ND	ND	ND	50
1,2-Dichlorobenzene	ND	ND	ND	50
1,3-Dichlorobenzene	ND	ND	ND	50
1,3-Dinitrobenzene	ND	ND	ND	50
1,4-Dichlorobenzene	ND	ND	ND	50
1,4-Naphthoquinone	ND	ND	ND	50
1-Methylnaphthalene	ND	ND	ND	50
2,2'-oxybis(1-chloropropane)	ND	ND	ND	50
2,3,4,6-Tetrachlorophenol	ND	ND	ND	50
2,4,5-Trichlorophenol	ND	ND	ND	50
2,4,6-Trichlorophenol	ND	ND	ND	50
2,4-Dichlorophenol	ND	ND	ND	50
2,4-Dinitrophenol	ND	ND	ND	50
2,4-Dinitrotoluene	ND	ND	ND	50
2,4-dimethylphenol	ND	ND	ND	50
2,6-Dichlorophenol	ND	ND	ND	50
2,6-Dinitrotoluene	ND	ND	ND	50
2-Chloronaphthalene	ND	ND	ND	50
2-Chlorophenol	ND	ND	ND	50
2-Methylnaphthalene	ND	ND	ND	50
2-Methylphenol	ND	ND	ND	50
2-Nitroaniline	ND	ND	ND	50
2-Nitrophenol	ND	ND	ND	50
3&4-Methylphenol	ND	ND	ND	50
3,3'-Dichlorobenzidine	ND	ND	ND	50
3-Methylcholanthrene	ND	ND	ND	50
3-Nitroaniline	ND	ND	ND	50
4,6-Dinitro-2-methylphenol	ND	ND	ND	50
4-Bromophenyl-phenylether	ND	ND	ND	50
4-Chloro-3-methylphenol	ND	ND	ND	50
4-Chloroaniline	ND	ND	ND	50
4-Chlorophenyl-phenylether	ND	ND	ND	50
4-Nitroaniline	ND	ND	ND	50
4-Nitrophenol	ND	ND	ND	50
4-nitroquinoline-1-oxide	ND	ND	ND	50
Acenaphthene	ND	ND	ND	50
Acenaphthylene	ND	ND	ND	50
Acetophenone	ND	ND	ND	50
Aniline	ND	ND	ND	50
Anthracene	ND	ND	ND	50
Aramite	ND	ND	ND	50
Azobenzene	ND	ND	ND	50
Benzidine	ND	ND	ND	50
Benzo(a)anthracene	ND	ND	ND	50
Benzo(a)pyrene	ND	ND	ND	50
Benzo(b)fluoranthene	ND	ND	ND	50
Benzo(g,h,i)perylene	ND	ND	ND	50
Benzo(k)fluoranthene	ND	ND	ND	50
Benzoic acid	ND	ND	ND	50
Benzyl alcohol	ND	ND	ND	50
Bis(2-Chloroethyl)ether	ND	ND	ND	50
Bis(2-ethylhexyl)phthalate	ND	ND	ND	50
Butylbenzylphthalate	ND	ND	ND	50
Carbazole	ND	ND	ND	50

Chlorobenzilate	ND	ND	ND	50
Chrysene	ND	ND	ND	50
Di-n-butylphthalate	ND	ND	ND	50
Di-n-octyl phthalate	ND	ND	ND	50
Dibenz(a,h)anthracene	ND	ND	ND	50
Dibenzofuran	ND	ND	ND	50
Diethylphthalate	2.5	3	15	50
Dimethyl phthalate	ND	ND	ND	50
Dinoseb	ND	ND	ND	50
Ethyl methanesulfonate	ND	ND	ND	50
Fluoranthene	ND	ND	ND	50
Fluorene	ND	ND	ND	50
Hexachlorobenzene	ND	ND	ND	50
Hexachlorobutadiene	ND	ND	ND	50
Hexachlorocyclopentadiene	ND	ND	ND	50
Hexachloroethane	ND	ND	ND	50
Hexachloropropene	ND	ND	ND	50
Indeno(1,2,3-cd)pyrene	ND	ND	ND	50
Isodrin	ND	ND	ND	50
Isophorone	ND	ND	ND	50
Isosafrole	ND	ND	ND	50
Kepone	ND	ND	ND	50
Methyl methanesulfonate	ND	ND	ND	50
N-Nitrosodiphenylamine	ND	ND	ND	50
N-nitroso-di-n-propylamine	ND	ND	ND	50
N-nitrosodimethylamine	ND	ND	ND	50
Naphthalene	ND	ND	ND	50
Nitrobenzene	ND	ND	ND	50
Pentachlorobenzene	ND	ND	ND	50
Pentachloronitrobenzene	ND	ND	ND	50
Pentachlorophenol	ND	ND	ND	50
Phenacetin	ND	ND	ND	50
Phenanthrene	ND	ND	ND	50
Phenol	ND	ND	ND	50
Pyrene	ND	ND	ND	50
Pyridine	ND	ND	ND	50
Safrole	ND	ND	ND	50
bis(-2-Chloroethoxy)methane	ND	ND	ND	50

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Fortified Blank (LFB) Results

Henry's Dry Cleaners - Laconia, NH

PARAMETER	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
1,2,4,5-Tetrachlorobenzene	40	11	28	20 - 104
1,2,4-Trichlorobenzene	40	9	22	11 - 97
1,2-Dichlorobenzene	40	9	22	11 - 93
1,3-Dichlorobenzene	40	8	20	8.3 - 86
1,3-Dinitrobenzene	40	22	56	58 - 122
1,4-Dichlorobenzene	40	8	20	11 - 86
1,4-Naphthoquinone	40	18	46	19 - 133
1-Methylnaphthalene	40	12	30	30 - 111
2,2'-oxybis(1-chloropropane)	40	14	34	37 - 119
2,3,4,6-Tetrachlorophenol	40	19	47	52 - 128
2,4,5-Trichlorophenol	40	18	44	54 - 121
2,4,6-Trichlorophenol	40	17	44	56 - 120
2,4-Dichlorophenol	40	16	41	55 - 112
2,4-Dinitrophenol	40	12	29	15 - 134
2,4-Dinitrotoluene	40	20	49	59 - 130
2,4-dimethylphenol	40	18	45	38 - 117
2,6-Dichlorophenol	40	17	42	52 - 112
2,6-Dinitrotoluene	40	19	48	56 - 129
2-Chloronaphthalene	40	13	32	29 - 118
2-Chlorophenol	40	15	36	49 - 104
2-Methylnaphthalene	40	12	30	27 - 108
2-Methylphenol	40	16	39	41 - 109
2-Nitroaniline	40	18	46	48 - 150
2-Nitrophenol	40	15	38	53 - 117
3&4-Methylphenol	80	32	40	18 - 127
3,3'-Dichlorobenzidine	40	18	44	52 - 129
3-Methylcholanthrene	40	0	ND	51 - 119
3-Nitroaniline	40	18	45	53 - 128
4,6-Dinitro-2-methylphenol	40	16	41	42 - 121
4-Bromophenyl-phenylether	40	17	43	51 - 119
4-Chloro-3-methylphenol	40	18	45	51 - 128
4-Chloroaniline	40	17	42	37 - 115
4-Chlorophenyl-phenylether	40	16	40	47 - 116
4-Nitroaniline	40	19	47	44 - 139
4-Nitrophenol	40	10	26	22 - 84
4-nitroquinoline-1-oxide	40	15	39	30 - 117
Acenaphthene	40	15	37	47 - 111
Acenaphthylene	40	15	38	50 - 112
Acetophenone	40	17	42	35 - 134
Aniline	40	15	37	33 - 102
Anthracene	40	19	49	58 - 124
Aramite	40	19	47	37 - 126
Azobenzene	40	17	43	54 - 120
Benzidine	40	9	23	10 - 85
Benzo(a)anthracene	40	19	46	62 - 120
Benzo(a)pyrene	40	19	48	56 - 128
Benzo(b)fluoranthene	40	18	46	50 - 135
Benzo(g,h,i)perylene	40	18	46	53 - 126
Benzo(k)fluoranthene	40	19	48	55 - 126
Benzoic acid	40	0	ND	17 - 77

Benzyl alcohol	40	11	28	31 - 121
Bis(2-Chloroethyl)ether	40	15	38	52 - 106
Bis(2-ethylhexyl)phthalate	40	19	48	63 - 130
Butylbenzylphthalate	40	20	50	60 - 133
Carbazole	40	19	47	57 - 127
Chlorobenzilate	40	19	48	60 - 131
Chrysene	40	18	45	60 - 116
Di-n-butylphthalate	40	20	51	60 - 133
Di-n-octyl phthalate	40	20	49	48 - 133
Dibenz(a,h)anthracene	40	18	45	55 - 130
Dibenzofuran	40	15	39	51 - 110
Diethylphthalate	40	19	48	38 - 146
Dimethyl phthalate	40	19	48	58 - 121
Dinoseb	40	18	44	19 - 78
Ethyl methanesulfonate	40	18	44	48 - 115
Fluoranthene	40	20	50	57 - 128
Fluorene	40	17	43	53 - 116
Hexachlorobenzene	40	17	43	55 - 116
Hexachlorobutadiene	40	7	18	10 - 92
Hexachlorocyclopentadiene	40	7	18	1.5 - 108
Hexachloroethane	40	7	17	11 - 83
Hexachloropropene	40	7	18	13 - 96
Indeno(1,2,3-cd)pyrene	40	18	46	54 - 129
Isodrin	40	18	46	53 - 124
Isophorone	40	18	44	53 - 128
Isosafrole	40	14	35	41 - 112
Kepone	40	19	46	10 - 140
Methyl methanesulfonate	40	14	35	25 - 104
N-Nitrosodiphenylamine	40	18	45	56 - 115
N-nitroso-di-n-propylamine	40	16	41	47 - 126
N-nitrosodimethylamine	40	10	25	29 - 76
Naphthalene	40	11	29	31 - 104
Nitrobenzene	40	15	37	53 - 108
Pentachlorobenzene	40	15	38	44 - 110
Pentachloronitrobenzene	40	19	47	57 - 127
Pentachlorophenol	40	18	45	31 - 121
Phenacetin	40	21	52	51 - 142
Phenanthrene	40	18	45	56 - 119
Phenol	40	9	22	18 - 69
Pyrene	40	19	47	62 - 117
Pyridine	40	9	22	22 - 75
Safrole	40	13	33	49 - 114
bis(-2-Chloroethoxy)methane	40	17	44	56 - 112

Comments: All recoveries for surrogates and target analytes in LFB below QC criteria.

Samples in Batch AB28177, AB28178

PN 12030018

USEPA Region 1
START III

CHAIN OF CUSTODY RECORD
Henry's Dry Cleaners
Contact Name: Janis Tsang
Contact Phone: 617-413-5053

No: 1-032212-143950-0004
Site #: R01-120316TJ
Lab: NERL/OEME
Lab Contact: Doris Guzman

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0015 ✓	GW-10	OSW-1	VOCs	Ground Water	2012-03-22	12:40	4	40 mL Vial	HCl	
	R01-120314JT-0015	GW-10	OSW-1	SVOCs	Ground Water	2012-03-22	12:40	2	1 L Amber		
	R01-120314JT-0018 ✓	GW-13	MW-101S	VOCs	Ground Water	2012-03-22	11:15	4	40 mL Vial	HCl	
	R01-120314JT-0018	GW-13	MW-101S	SVOCs	Ground Water	2012-03-22	11:15	2	1 L Amber		

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	[illegible]	3/22/12	[illegible]	3/22/12	1505	OEME	[illegible]	3/23/12	[illegible]	3/23/12	7:53

Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

March 26, 2012

Janis Tsang - mail Code OSRR02-2
US EPA New England R1

Project Number: 12030017
Project: Henry's Dry Cleaners - Laconia, NH
Analysis: BNAs in Water
Analyst: Bhavita Patel

B.P 3/26/12

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-BNAW2.

Samples were prepared using separatory funnel liquid-liquid extraction. The samples were analyzed using high resolution capillary column chromatography and quadrapole mass spectrometry (GC/MS). The SOP for this method is based on the US EPA SW-846 Methods 3510C, 8270C, Method 625, and EIASOP-BNAGCMS7.

Date Samples Received by the Laboratory: 03/22/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Daniel N. Boudreau 3/27/12
Daniel N. Boudreau
Chemistry Team Leader

Qualifiers:

RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
NC = Not calculated since analyte concentration is ND.
J = Estimated value
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 5 times the concentration in the blank.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Water

Client Sample ID:	R01-120314JT-0012	Lab Sample ID:	AB28170
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/22/12	Volume Extracted:	1000 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	
95-50-1	1,2-Dichlorobenzene	ND	2.5	
541-73-1	1,3-Dichlorobenzene	ND	2.5	
99-65-0	1,3-Dinitrobenzene	ND	2.5	
106-46-7	1,4-Dichlorobenzene	ND	2.5	
130-15-4	1,4-Naphthoquinone	ND	2.5	
90-12-0	1-Methylnaphthalene	ND	2.5	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	2.5	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2.5	
95-95-4	2,4,5-Trichlorophenol	ND	2.5	
88-06-2	2,4,6-Trichlorophenol	ND	2.5	
120-83-2	2,4-Dichlorophenol	ND	2.5	
51-28-5	2,4-Dinitrophenol	ND	10.0	
121-14-2	2,4-Dinitrotoluene	ND	2.5	
105-67-9	2,4-dimethylphenol	ND	2.5	
87-65-0	2,6-Dichlorophenol	ND	2.5	
606-20-2	2,6-Dinitrotoluene	ND	2.5	
91-58-7	2-Chloronaphthalene	ND	2.5	
95-57-8	2-Chlorophenol	ND	2.5	
91-57-6	2-Methylnaphthalene	ND	2.5	
95-48-7	2-Methylphenol	ND	2.5	
88-74-4	2-Nitroaniline	ND	2.5	
88-75-5	2-Nitrophenol	ND	2.5	
108-39-4/106-44-.	3&4-Methylphenol	ND	5.0	
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	
56-49-5	3-Methylcholanthrene	ND	2.5	
99-09-2	3-Nitroaniline	ND	2.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND	5.0	
101-55-3	4-Bromophenyl-phenylether	ND	2.5	
59-50-7	4-Chloro-3-methylphenol	ND	2.5	
106-47-8	4-Chloroaniline	ND	2.5	
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	
100-01-6	4-Nitroaniline	ND	2.5	
100-02-7	4-Nitrophenol	ND	5.0	
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	
83-32-9	Acenaphthene	ND	2.5	
208-96-8	Acenaphthylene	ND	2.5	
98-86-2	Acetophenone	ND	2.5	
62-53-3	Aniline	ND	2.5	
120-12-7	Anthracene	ND	2.5	
140-57-8	Aramite	ND	2.5	

103-33-3	Azobenzene	ND	2.5
92-87-5	Benzidine	ND	2.5
56-55-3	Benzo(a)anthracene	ND	2.5
50-32-8	Benzo(a)pyrene	ND	2.5
205-99-2	Benzo(b)fluoranthene	ND	2.5
191-24-2	Benzo(g,h,i)perylene	ND	2.5
207-08-9	Benzo(k)fluoranthene	ND	2.5
65-85-0	Benzoic acid	ND	5.0
100-51-6	Benzyl alcohol	ND	2.5
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5
85-68-7	Butylbenzylphthalate	ND	2.5
86-74-8	Carbazole	ND	2.5
510-15-6	Chlorobenzilate	ND	2.5
218-01-9	Chrysene	ND	2.5
84-74-2	Di-n-butylphthalate	ND	2.5
117-84-0	Di-n-octyl phthalate	ND	2.5
53-70-3	Dibenz(a,h)anthracene	ND	2.5
132-64-9	Dibenzofuran	ND	2.5
84-66-2	Diethylphthalate	ND	2.5
131-11-3	Dimethyl phthalate	ND	2.5
88-85-7	Dinoseb	ND	5.0
62-50-0	Ethyl methanesulfonate	ND	2.5
206-44-0	Fluoranthene	ND	2.5
86-73-7	Fluorene	ND	2.5
118-74-1	Hexachlorobenzene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
77-47-4	Hexachlorocyclopentadiene	ND	2.5
67-72-1	Hexachloroethane	ND	2.5
1888-71-7	Hexachloropropene	ND	2.5
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5
465-73-6	Isodrin	ND	2.5
78-59-1	Isophorone	ND	2.5
120-58-1	Isosafrole	ND	2.5
143-50-0	Kepone	ND	5.0
66-27-3	Methyl methanesulfonate	ND	2.5
86-30-6	N-Nitrosodiphenylamine	ND	2.5
621-64-7	N-nitroso-di-n-propylamine	ND	2.5
62-75-9	N-nitrosodimethylamine	ND	2.5
91-20-3	Naphthalene	ND	2.5
98-95-3	Nitrobenzene	ND	2.5
608-93-5	Pentachlorobenzene	ND	2.5
82-68-8	Pentachloronitrobenzene	ND	2.5
87-86-5	Pentachlorophenol	ND	5.0
62-44-2	Phenacetin	ND	2.5
85-01-8	Phenanthrene	ND	2.5
108-95-2	Phenol	ND	2.5
129-00-0	Pyrene	ND	2.5
110-86-1	Pyridine	ND	2.5
94-59-7	Safrole	ND	2.5
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2-Fluorophenol (SS1)	15	12 - 74
Phenol-d6 (SS2)	17	6 - 52
Nitrobenzene-d5 (SS3)	73	32 - 114
2-Fluorobiphenyl (SS4)	81	33 - 119
2,4,6-Tribromophenol (SS5)	33	30 - 144
p-Terphenyl-d14 (SS6)	86	40 - 132

Comments: The following compounds did not meet the initial calibration criterion of % RSD <20 so they were quanitatied using first order linear regression, the RL for these.compounds is 5.0ppb; benzoic acid, 4-nitrophenol, 4,6-dinito-2-methyl phenol, pentachlorophenol, dinoseb and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0ppb.

Tentatively Identified Non-Target Compounds

1. Tetrachloroethylene 120ppb J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Water

Client Sample ID:	R01-120314JT-0013	Lab Sample ID:	AB28171
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/22/12	Volume Extracted:	1000 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.5	J
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	J
95-50-1	1,2-Dichlorobenzene	ND	2.5	J
541-73-1	1,3-Dichlorobenzene	ND	2.5	J
99-65-0	1,3-Dinitrobenzene	ND	2.5	J
106-46-7	1,4-Dichlorobenzene	ND	2.5	J
130-15-4	1,4-Naphthoquinone	ND	2.5	J
90-12-0	1-Methylnaphthalene	ND	2.5	J
108-60-1	2,2'-oxybis(1-chloropropane)	ND	2.5	J
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2.5	J
95-95-4	2,4,5-Trichlorophenol	ND	2.5	J
88-06-2	2,4,6-Trichlorophenol	ND	2.5	J
120-83-2	2,4-Dichlorophenol	ND	2.5	J
51-28-5	2,4-Dinitrophenol	ND	10.0	J
121-14-2	2,4-Dinitrotoluene	ND	2.5	J
105-67-9	2,4-dimethylphenol	ND	2.5	J
87-65-0	2,6-Dichlorophenol	ND	2.5	J
606-20-2	2,6-Dinitrotoluene	ND	2.5	J
91-58-7	2-Chloronaphthalene	ND	2.5	J
95-57-8	2-Chlorophenol	ND	2.5	J
91-57-6	2-Methylnaphthalene	ND	2.5	J
95-48-7	2-Methylphenol	ND	2.5	J
88-74-4	2-Nitroaniline	ND	2.5	J
88-75-5	2-Nitrophenol	ND	2.5	J
108-39-4/106-44-.	3&4-Methylphenol	ND	5.0	J
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	J
56-49-5	3-Methylcholanthrene	ND	2.5	J
99-09-2	3-Nitroaniline	ND	2.5	J
534-52-1	4,6-Dinitro-2-methylphenol	ND	5.0	J
101-55-3	4-Bromophenyl-phenylether	ND	2.5	J
59-50-7	4-Chloro-3-methylphenol	ND	2.5	J
106-47-8	4-Chloroaniline	ND	2.5	J
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	J
100-01-6	4-Nitroaniline	ND	2.5	J
100-02-7	4-Nitrophenol	ND	5.0	J
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	J
83-32-9	Acenaphthene	ND	2.5	J
208-96-8	Acenaphthylene	ND	2.5	J
98-86-2	Acetophenone	ND	2.5	J
62-53-3	Aniline	ND	2.5	J
120-12-7	Anthracene	ND	2.5	J
140-57-8	Aramite	ND	2.5	J

103-33-3	Azobenzene	ND	2.5	J
92-87-5	Benzidine	ND	2.5	J
56-55-3	Benzo(a)anthracene	ND	2.5	J
50-32-8	Benzo(a)pyrene	ND	2.5	J
205-99-2	Benzo(b)fluoranthene	ND	2.5	J
191-24-2	Benzo(g,h,i)perylene	ND	2.5	J
207-08-9	Benzo(k)fluoranthene	ND	2.5	J
65-85-0	Benzoic acid	ND	5.0	J
100-51-6	Benzyl alcohol	ND	2.5	J
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5	J
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5	J
85-68-7	Butylbenzylphthalate	ND	2.5	J
86-74-8	Carbazole	ND	2.5	J
510-15-6	Chlorobenzilate	ND	2.5	J
218-01-9	Chrysene	ND	2.5	J
84-74-2	Di-n-butylphthalate	ND	2.5	J
117-84-0	Di-n-octyl phthalate	ND	2.5	J
53-70-3	Dibenz(a,h)anthracene	ND	2.5	J
132-64-9	Dibenzofuran	ND	2.5	J
84-66-2	Diethylphthalate	ND	2.5	J
131-11-3	Dimethyl phthalate	ND	2.5	J
88-85-7	Dinoseb	ND	5.0	J
62-50-0	Ethyl methanesulfonate	ND	2.5	J
206-44-0	Fluoranthene	ND	2.5	J
86-73-7	Fluorene	ND	2.5	J
118-74-1	Hexachlorobenzene	ND	2.5	J
87-68-3	Hexachlorobutadiene	ND	2.5	J
77-47-4	Hexachlorocyclopentadiene	ND	2.5	J
67-72-1	Hexachloroethane	ND	2.5	J
1888-71-7	Hexachloropropene	ND	2.5	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5	J
465-73-6	Isodrin	ND	2.5	J
78-59-1	Isophorone	ND	2.5	J
120-58-1	Isosafrole	ND	2.5	J
143-50-0	Kepone	ND	5.0	J
66-27-3	Methyl methanesulfonate	ND	2.5	J
86-30-6	N-Nitrosodiphenylamine	ND	2.5	J
621-64-7	N-nitroso-di-n-propylamine	ND	2.5	J
62-75-9	N-nitrosodimethylamine	ND	2.5	J
91-20-3	Naphthalene	ND	2.5	J
98-95-3	Nitrobenzene	ND	2.5	J
608-93-5	Pentachlorobenzene	ND	2.5	J
82-68-8	Pentachloronitrobenzene	ND	2.5	J
87-86-5	Pentachlorophenol	ND	5.0	J
62-44-2	Phenacetin	ND	2.5	J
85-01-8	Phenanthrene	ND	2.5	J
108-95-2	Phenol	ND	2.5	J
129-00-0	Pyrene	ND	2.5	J
110-86-1	Pyridine	ND	2.5	J
94-59-7	Safrole	ND	2.5	J
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5	J

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2-Fluorophenol (SS1)	5	12 - 74
Phenol-d6 (SS2)	3	6 - 52
Nitrobenzene-d5 (SS3)	11	32 - 114
2-Fluorobiphenyl (SS4)	15	33 - 119
2,4,6-Tribromophenol (SS5)	7	30 - 144
p-Terphenyl-d14 (SS6)	15	40 - 132

Comments: The following compounds did not meet the initial calibration criterion of % RSD <20 so they were quanitatied using first order linear regression, the RL for these compounds is 5.0ppb; benzoic acid, 4-nitrophenol, 4,6-dinito-2-methyl phenol, pentachlorophenol, dinoseb and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0ppb.

Surrogates are low in this sample, results will be qualified with a J.

Tentatively Identified Non-Target Compounds

1. Tetrachloroethylene 170ppb J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Water

Client Sample ID:	R01-120314JT-0016	Lab Sample ID:	AB28172
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/22/12	Volume Extracted:	1000 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	
95-50-1	1,2-Dichlorobenzene	ND	2.5	
541-73-1	1,3-Dichlorobenzene	ND	2.5	
99-65-0	1,3-Dinitrobenzene	ND	2.5	
106-46-7	1,4-Dichlorobenzene	ND	2.5	
130-15-4	1,4-Naphthoquinone	ND	2.5	
90-12-0	1-Methylnaphthalene	ND	2.5	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	2.5	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2.5	
95-95-4	2,4,5-Trichlorophenol	ND	2.5	
88-06-2	2,4,6-Trichlorophenol	ND	2.5	
120-83-2	2,4-Dichlorophenol	ND	2.5	
51-28-5	2,4-Dinitrophenol	ND	10.0	
121-14-2	2,4-Dinitrotoluene	ND	2.5	
105-67-9	2,4-dimethylphenol	ND	2.5	
87-65-0	2,6-Dichlorophenol	ND	2.5	
606-20-2	2,6-Dinitrotoluene	ND	2.5	
91-58-7	2-Chloronaphthalene	ND	2.5	
95-57-8	2-Chlorophenol	ND	2.5	
91-57-6	2-Methylnaphthalene	ND	2.5	
95-48-7	2-Methylphenol	ND	2.5	
88-74-4	2-Nitroaniline	ND	2.5	
88-75-5	2-Nitrophenol	ND	2.5	
108-39-4/106-44-.	3&4-Methylphenol	ND	5.0	
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	
56-49-5	3-Methylcholanthrene	ND	2.5	
99-09-2	3-Nitroaniline	ND	2.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND	5.0	
101-55-3	4-Bromophenyl-phenylether	ND	2.5	
59-50-7	4-Chloro-3-methylphenol	ND	2.5	
106-47-8	4-Chloroaniline	ND	2.5	
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	
100-01-6	4-Nitroaniline	ND	2.5	
100-02-7	4-Nitrophenol	ND	5.0	
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	
83-32-9	Acenaphthene	ND	2.5	
208-96-8	Acenaphthylene	ND	2.5	
98-86-2	Acetophenone	ND	2.5	
62-53-3	Aniline	ND	2.5	
120-12-7	Anthracene	ND	2.5	
140-57-8	Aramite	ND	2.5	

103-33-3	Azobenzene	ND	2.5
92-87-5	Benzidine	ND	2.5
56-55-3	Benzo(a)anthracene	ND	2.5
50-32-8	Benzo(a)pyrene	ND	2.5
205-99-2	Benzo(b)fluoranthene	ND	2.5
191-24-2	Benzo(g,h,i)perylene	ND	2.5
207-08-9	Benzo(k)fluoranthene	ND	2.5
65-85-0	Benzoic acid	ND	5.0
100-51-6	Benzyl alcohol	ND	2.5
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5
85-68-7	Butylbenzylphthalate	ND	2.5
86-74-8	Carbazole	ND	2.5
510-15-6	Chlorobenzilate	ND	2.5
218-01-9	Chrysene	ND	2.5
84-74-2	Di-n-butylphthalate	ND	2.5
117-84-0	Di-n-octyl phthalate	ND	2.5
53-70-3	Dibenz(a,h)anthracene	ND	2.5
132-64-9	Dibenzofuran	ND	2.5
84-66-2	Diethylphthalate	ND	2.5
131-11-3	Dimethyl phthalate	ND	2.5
88-85-7	Dinoseb	ND	5.0
62-50-0	Ethyl methanesulfonate	ND	2.5
206-44-0	Fluoranthene	ND	2.5
86-73-7	Fluorene	ND	2.5
118-74-1	Hexachlorobenzene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
77-47-4	Hexachlorocyclopentadiene	ND	2.5
67-72-1	Hexachloroethane	ND	2.5
1888-71-7	Hexachloropropene	ND	2.5
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5
465-73-6	Isodrin	ND	2.5
78-59-1	Isophorone	ND	2.5
120-58-1	Isosafrole	ND	2.5
143-50-0	Kepone	ND	5.0
66-27-3	Methyl methanesulfonate	ND	2.5
86-30-6	N-Nitrosodiphenylamine	ND	2.5
621-64-7	N-nitroso-di-n-propylamine	ND	2.5
62-75-9	N-nitrosodimethylamine	ND	2.5
91-20-3	Naphthalene	ND	2.5
98-95-3	Nitrobenzene	ND	2.5
608-93-5	Pentachlorobenzene	ND	2.5
82-68-8	Pentachloronitrobenzene	ND	2.5
87-86-5	Pentachlorophenol	ND	5.0
62-44-2	Phenacetin	ND	2.5
85-01-8	Phenanthrene	ND	2.5
108-95-2	Phenol	ND	2.5
129-00-0	Pyrene	ND	2.5
110-86-1	Pyridine	ND	2.5
94-59-7	Safrole	ND	2.5
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2-Fluorophenol (SS1)	31	12 - 74
Phenol-d6 (SS2)	20	6 - 52
Nitrobenzene-d5 (SS3)	71	32 - 114
2-Fluorobiphenyl (SS4)	77	33 - 119
2,4,6-Tribromophenol (SS5)	48	30 - 144
p-Terphenyl-d14 (SS6)	86	40 - 132

Comments: The following compounds did not meet the initial calibration criterion of % RSD <20 so they were quanitatied using first order linear regression, the RL for these compounds is 5.0ppb; benzoic acid, 4-nitrophenol, 4,6-dinito-2-methyl phenol, pentachlorophenol, dinoseb and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0ppb.

Tentatively Identified Non-Target Compounds

1. Tetrachloroethylene 650ppb J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

Laboratory Blank Results

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	GW
Date of Extraction:	3/22/12	Volume Extracted:	1000 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	
95-50-1	1,2-Dichlorobenzene	ND	2.5	
541-73-1	1,3-Dichlorobenzene	ND	2.5	
99-65-0	1,3-Dinitrobenzene	ND	2.5	
106-46-7	1,4-Dichlorobenzene	ND	2.5	
130-15-4	1,4-Naphthoquinone	ND	2.5	
90-12-0	1-Methylnaphthalene	ND	2.5	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	2.5	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2.5	
95-95-4	2,4,5-Trichlorophenol	ND	2.5	
88-06-2	2,4,6-Trichlorophenol	ND	2.5	
120-83-2	2,4-Dichlorophenol	ND	2.5	
51-28-5	2,4-Dinitrophenol	ND	10.0	
121-14-2	2,4-Dinitrotoluene	ND	2.5	
105-67-9	2,4-dimethylphenol	ND	2.5	
87-65-0	2,6-Dichlorophenol	ND	2.5	
606-20-2	2,6-Dinitrotoluene	ND	2.5	
91-58-7	2-Chloronaphthalene	ND	2.5	
95-57-8	2-Chlorophenol	ND	2.5	
91-57-6	2-Methylnaphthalene	ND	2.5	
95-48-7	2-Methylphenol	ND	2.5	
88-74-4	2-Nitroaniline	ND	2.5	
88-75-5	2-Nitrophenol	ND	2.5	
108-39-4/106-44-.	3&4-Methylphenol	ND	5.0	
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	
56-49-5	3-Methylcholanthrene	ND	2.5	
99-09-2	3-Nitroaniline	ND	2.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND	5.0	
101-55-3	4-Bromophenyl-phenylether	ND	2.5	
59-50-7	4-Chloro-3-methylphenol	ND	2.5	
106-47-8	4-Chloroaniline	ND	2.5	
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	
100-01-6	4-Nitroaniline	ND	2.5	
100-02-7	4-Nitrophenol	ND	5.0	
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	
83-32-9	Acenaphthene	ND	2.5	
208-96-8	Acenaphthylene	ND	2.5	
98-86-2	Acetophenone	ND	2.5	
62-53-3	Aniline	ND	2.5	
120-12-7	Anthracene	ND	2.5	
140-57-8	Aramite	ND	2.5	

103-33-3	Azobenzene	ND	2.5
92-87-5	Benzidine	ND	2.5
56-55-3	Benzo(a)anthracene	ND	2.5
50-32-8	Benzo(a)pyrene	ND	2.5
205-99-2	Benzo(b)fluoranthene	ND	2.5
191-24-2	Benzo(g,h,i)perylene	ND	2.5
207-08-9	Benzo(k)fluoranthene	ND	2.5
65-85-0	Benzoic acid	ND	5.0
100-51-6	Benzyl alcohol	ND	2.5
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5
85-68-7	Butylbenzylphthalate	ND	2.5
86-74-8	Carbazole	ND	2.5
510-15-6	Chlorobenzilate	ND	2.5
218-01-9	Chrysene	ND	2.5
84-74-2	Di-n-butylphthalate	ND	2.5
117-84-0	Di-n-octyl phthalate	ND	2.5
53-70-3	Dibenz(a,h)anthracene	ND	2.5
132-64-9	Dibenzofuran	ND	2.5
84-66-2	Diethylphthalate	ND	2.5
131-11-3	Dimethyl phthalate	ND	2.5
88-85-7	Dinoseb	ND	5.0
62-50-0	Ethyl methanesulfonate	ND	2.5
206-44-0	Fluoranthene	ND	2.5
86-73-7	Fluorene	ND	2.5
118-74-1	Hexachlorobenzene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
77-47-4	Hexachlorocyclopentadiene	ND	2.5
67-72-1	Hexachloroethane	ND	2.5
1888-71-7	Hexachloropropene	ND	2.5
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5
465-73-6	Isodrin	ND	2.5
78-59-1	Isophorone	ND	2.5
120-58-1	Isosafrole	ND	2.5
143-50-0	Kepone	ND	5.0
66-27-3	Methyl methanesulfonate	ND	2.5
86-30-6	N-Nitrosodiphenylamine	ND	2.5
621-64-7	N-nitroso-di-n-propylamine	ND	2.5
62-75-9	N-nitrosodimethylamine	ND	2.5
91-20-3	Naphthalene	ND	2.5
98-95-3	Nitrobenzene	ND	2.5
608-93-5	Pentachlorobenzene	ND	2.5
82-68-8	Pentachloronitrobenzene	ND	2.5
87-86-5	Pentachlorophenol	ND	5.0
62-44-2	Phenacetin	ND	2.5
85-01-8	Phenanthrene	ND	2.5
108-95-2	Phenol	ND	2.5
129-00-0	Pyrene	ND	2.5
110-86-1	Pyridine	ND	2.5
94-59-7	Safrole	ND	2.5
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2,4,6-Tribromophenol (SS5)	53	34 - 122
2-Fluorobiphenyl (SS4)	84	46 - 112
2-Fluorophenol (SS1)	35	23 - 74
Nitrobenzene-d5 (SS3)	81	33 - 122
Phenol-d6 (SS2)	25	13 - 53
p-Terphenyl-d14 (SS6)	95	52 - 126

Comments: The following compounds did not meet the initial calibration criterion of % RSD <20 so they were quanitatied using first order linear regression, the RL for these compounds is 5.0ppb; benzoic acid, 4-nitrophenol, 4,6-dinito-2-methyl phenol, pentachlorophenol, dinoseb and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0ppb.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Water

Client Sample ID:	R01-120314JT-0017	Lab Sample ID:	AB28173
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/22/12	Volume Extracted:	1000 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	
95-50-1	1,2-Dichlorobenzene	ND	2.5	
541-73-1	1,3-Dichlorobenzene	ND	2.5	
99-65-0	1,3-Dinitrobenzene	ND	2.5	
106-46-7	1,4-Dichlorobenzene	ND	2.5	
130-15-4	1,4-Naphthoquinone	ND	2.5	
90-12-0	1-Methylnaphthalene	ND	2.5	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	2.5	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2.5	
95-95-4	2,4,5-Trichlorophenol	ND	2.5	
88-06-2	2,4,6-Trichlorophenol	ND	2.5	
120-83-2	2,4-Dichlorophenol	ND	2.5	
51-28-5	2,4-Dinitrophenol	ND	10.0	
121-14-2	2,4-Dinitrotoluene	ND	2.5	
105-67-9	2,4-dimethylphenol	ND	2.5	
87-65-0	2,6-Dichlorophenol	ND	2.5	
606-20-2	2,6-Dinitrotoluene	ND	2.5	
91-58-7	2-Chloronaphthalene	ND	2.5	
95-57-8	2-Chlorophenol	ND	2.5	
91-57-6	2-Methylnaphthalene	ND	2.5	
95-48-7	2-Methylphenol	ND	2.5	
88-74-4	2-Nitroaniline	ND	2.5	
88-75-5	2-Nitrophenol	ND	2.5	
108-39-4/106-44-.	3&4-Methylphenol	ND	5.0	
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	
56-49-5	3-Methylcholanthrene	ND	2.5	
99-09-2	3-Nitroaniline	ND	2.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND	5.0	
101-55-3	4-Bromophenyl-phenylether	ND	2.5	
59-50-7	4-Chloro-3-methylphenol	ND	2.5	
106-47-8	4-Chloroaniline	ND	2.5	
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	
100-01-6	4-Nitroaniline	ND	2.5	
100-02-7	4-Nitrophenol	ND	5.0	
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	
83-32-9	Acenaphthene	ND	2.5	
208-96-8	Acenaphthylene	ND	2.5	
98-86-2	Acetophenone	ND	2.5	
62-53-3	Aniline	ND	2.5	
120-12-7	Anthracene	ND	2.5	
140-57-8	Aramite	ND	2.5	

103-33-3	Azobenzene	ND	2.5
92-87-5	Benzidine	ND	2.5
56-55-3	Benzo(a)anthracene	ND	2.5
50-32-8	Benzo(a)pyrene	ND	2.5
205-99-2	Benzo(b)fluoranthene	ND	2.5
191-24-2	Benzo(g,h,i)perylene	ND	2.5
207-08-9	Benzo(k)fluoranthene	ND	2.5
65-85-0	Benzoic acid	ND	5.0
100-51-6	Benzyl alcohol	ND	2.5
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5
85-68-7	Butylbenzylphthalate	ND	2.5
86-74-8	Carbazole	ND	2.5
510-15-6	Chlorobenzilate	ND	2.5
218-01-9	Chrysene	ND	2.5
84-74-2	Di-n-butylphthalate	ND	2.5
117-84-0	Di-n-octyl phthalate	ND	2.5
53-70-3	Dibenz(a,h)anthracene	ND	2.5
132-64-9	Dibenzofuran	ND	2.5
84-66-2	Diethylphthalate	ND	2.5
131-11-3	Dimethyl phthalate	ND	2.5
88-85-7	Dinoseb	ND	5.0
62-50-0	Ethyl methanesulfonate	ND	2.5
206-44-0	Fluoranthene	ND	2.5
86-73-7	Fluorene	ND	2.5
118-74-1	Hexachlorobenzene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
77-47-4	Hexachlorocyclopentadiene	ND	2.5
67-72-1	Hexachloroethane	ND	2.5
1888-71-7	Hexachloropropene	ND	2.5
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5
465-73-6	Isodrin	ND	2.5
78-59-1	Isophorone	ND	2.5
120-58-1	Isosafrole	ND	2.5
143-50-0	Kepone	ND	5.0
66-27-3	Methyl methanesulfonate	ND	2.5
86-30-6	N-Nitrosodiphenylamine	ND	2.5
621-64-7	N-nitroso-di-n-propylamine	ND	2.5
62-75-9	N-nitrosodimethylamine	ND	2.5
91-20-3	Naphthalene	ND	2.5
98-95-3	Nitrobenzene	ND	2.5
608-93-5	Pentachlorobenzene	ND	2.5
82-68-8	Pentachloronitrobenzene	ND	2.5
87-86-5	Pentachlorophenol	ND	5.0
62-44-2	Phenacetin	ND	2.5
85-01-8	Phenanthrene	ND	2.5
108-95-2	Phenol	ND	2.5
129-00-0	Pyrene	ND	2.5
110-86-1	Pyridine	ND	2.5
94-59-7	Safrole	ND	2.5
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2-Fluorophenol (SS1)	29	12 - 74
Phenol-d6 (SS2)	20	6 - 52
Nitrobenzene-d5 (SS3)	74	32 - 114
2-Fluorobiphenyl (SS4)	76	33 - 119
2,4,6-Tribromophenol (SS5)	53	30 - 144
p-Terphenyl-d14 (SS6)	78	40 - 132

Comments: The following compounds did not meet the initial calibration criterion of % RSD <20 so they were quanitatied using first order linear regression, the RL for these compounds is 5.0ppb; benzoic acid, 4-nitrophenol, 4,6-dinito-2-methyl phenol, pentachlorophenol, dinoseb and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0ppb.

Tentatively Identified Non-Target Compounds

1. Tetrachloroethylene 660ppb J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Water

Client Sample ID:	R01-120314JT-0019	Lab Sample ID:	AB28174
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/22/12	Volume Extracted:	1000 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	
95-50-1	1,2-Dichlorobenzene	ND	2.5	
541-73-1	1,3-Dichlorobenzene	ND	2.5	
99-65-0	1,3-Dinitrobenzene	ND	2.5	
106-46-7	1,4-Dichlorobenzene	ND	2.5	
130-15-4	1,4-Naphthoquinone	ND	2.5	
90-12-0	1-Methylnaphthalene	ND	2.5	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	2.5	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2.5	
95-95-4	2,4,5-Trichlorophenol	ND	2.5	
88-06-2	2,4,6-Trichlorophenol	ND	2.5	
120-83-2	2,4-Dichlorophenol	ND	2.5	
51-28-5	2,4-Dinitrophenol	ND	10.0	
121-14-2	2,4-Dinitrotoluene	ND	2.5	
105-67-9	2,4-dimethylphenol	ND	2.5	
87-65-0	2,6-Dichlorophenol	ND	2.5	
606-20-2	2,6-Dinitrotoluene	ND	2.5	
91-58-7	2-Chloronaphthalene	ND	2.5	
95-57-8	2-Chlorophenol	ND	2.5	
91-57-6	2-Methylnaphthalene	ND	2.5	
95-48-7	2-Methylphenol	ND	2.5	
88-74-4	2-Nitroaniline	ND	2.5	
88-75-5	2-Nitrophenol	ND	2.5	
108-39-4/106-44-.	3&4-Methylphenol	ND	5.0	
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	
56-49-5	3-Methylcholanthrene	ND	2.5	
99-09-2	3-Nitroaniline	ND	2.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND	5.0	
101-55-3	4-Bromophenyl-phenylether	ND	2.5	
59-50-7	4-Chloro-3-methylphenol	ND	2.5	
106-47-8	4-Chloroaniline	ND	2.5	
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	
100-01-6	4-Nitroaniline	ND	2.5	
100-02-7	4-Nitrophenol	ND	5.0	
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	
83-32-9	Acenaphthene	ND	2.5	
208-96-8	Acenaphthylene	ND	2.5	
98-86-2	Acetophenone	ND	2.5	
62-53-3	Aniline	ND	2.5	
120-12-7	Anthracene	ND	2.5	
140-57-8	Aramite	ND	2.5	

103-33-3	Azobenzene	ND	2.5
92-87-5	Benzidine	ND	2.5
56-55-3	Benzo(a)anthracene	ND	2.5
50-32-8	Benzo(a)pyrene	ND	2.5
205-99-2	Benzo(b)fluoranthene	ND	2.5
191-24-2	Benzo(g,h,i)perylene	ND	2.5
207-08-9	Benzo(k)fluoranthene	ND	2.5
65-85-0	Benzoic acid	ND	5.0
100-51-6	Benzyl alcohol	ND	2.5
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5
85-68-7	Butylbenzylphthalate	ND	2.5
86-74-8	Carbazole	ND	2.5
510-15-6	Chlorobenzilate	ND	2.5
218-01-9	Chrysene	ND	2.5
84-74-2	Di-n-butylphthalate	ND	2.5
117-84-0	Di-n-octyl phthalate	ND	2.5
53-70-3	Dibenz(a,h)anthracene	ND	2.5
132-64-9	Dibenzofuran	ND	2.5
84-66-2	Diethylphthalate	ND	2.5
131-11-3	Dimethyl phthalate	ND	2.5
88-85-7	Dinoseb	ND	5.0
62-50-0	Ethyl methanesulfonate	ND	2.5
206-44-0	Fluoranthene	ND	2.5
86-73-7	Fluorene	ND	2.5
118-74-1	Hexachlorobenzene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
77-47-4	Hexachlorocyclopentadiene	ND	2.5
67-72-1	Hexachloroethane	ND	2.5
1888-71-7	Hexachloropropene	ND	2.5
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5
465-73-6	Isodrin	ND	2.5
78-59-1	Isophorone	ND	2.5
120-58-1	Isosafrole	ND	2.5
143-50-0	Kepone	ND	5.0
66-27-3	Methyl methanesulfonate	ND	2.5
86-30-6	N-Nitrosodiphenylamine	ND	2.5
621-64-7	N-nitroso-di-n-propylamine	ND	2.5
62-75-9	N-nitrosodimethylamine	ND	2.5
91-20-3	Naphthalene	ND	2.5
98-95-3	Nitrobenzene	ND	2.5
608-93-5	Pentachlorobenzene	ND	2.5
82-68-8	Pentachloronitrobenzene	ND	2.5
87-86-5	Pentachlorophenol	ND	5.0
62-44-2	Phenacetin	ND	2.5
85-01-8	Phenanthrene	ND	2.5
108-95-2	Phenol	ND	2.5
129-00-0	Pyrene	ND	2.5
110-86-1	Pyridine	ND	2.5
94-59-7	Safrole	ND	2.5
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2-Fluorophenol (SS1)	30	12 - 74
Phenol-d6 (SS2)	20	6 - 52
Nitrobenzene-d5 (SS3)	75	32 - 114
2-Fluorobiphenyl (SS4)	78	33 - 119
2,4,6-Tribromophenol (SS5)	50	30 - 144
p-Terphenyl-d14 (SS6)	86	40 - 132

Comments: The following compounds did not meet the initial calibration criterion of % RSD <20 so they were quanitatied using first order linear regression, the RL for these compounds is 5.0ppb; benzoic acid, 4-nitrophenol, 4,6-dinito-2-methyl phenol, pentachlorophenol, dinoseb and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0ppb.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Water

Client Sample ID:	R01-120314JT-0020	Lab Sample ID:	AB28175
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/22/12	Volume Extracted:	1000 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	
95-50-1	1,2-Dichlorobenzene	ND	2.5	
541-73-1	1,3-Dichlorobenzene	ND	2.5	
99-65-0	1,3-Dinitrobenzene	ND	2.5	
106-46-7	1,4-Dichlorobenzene	ND	2.5	
130-15-4	1,4-Naphthoquinone	ND	2.5	
90-12-0	1-Methylnaphthalene	ND	2.5	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	2.5	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2.5	
95-95-4	2,4,5-Trichlorophenol	ND	2.5	
88-06-2	2,4,6-Trichlorophenol	ND	2.5	
120-83-2	2,4-Dichlorophenol	ND	2.5	
51-28-5	2,4-Dinitrophenol	ND	10.0	
121-14-2	2,4-Dinitrotoluene	ND	2.5	
105-67-9	2,4-dimethylphenol	ND	2.5	
87-65-0	2,6-Dichlorophenol	ND	2.5	
606-20-2	2,6-Dinitrotoluene	ND	2.5	
91-58-7	2-Chloronaphthalene	ND	2.5	
95-57-8	2-Chlorophenol	ND	2.5	
91-57-6	2-Methylnaphthalene	ND	2.5	
95-48-7	2-Methylphenol	ND	2.5	
88-74-4	2-Nitroaniline	ND	2.5	
88-75-5	2-Nitrophenol	ND	2.5	
108-39-4/106-44-.	3&4-Methylphenol	ND	5.0	
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	
56-49-5	3-Methylcholanthrene	ND	2.5	
99-09-2	3-Nitroaniline	ND	2.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND	5.0	
101-55-3	4-Bromophenyl-phenylether	ND	2.5	
59-50-7	4-Chloro-3-methylphenol	ND	2.5	
106-47-8	4-Chloroaniline	ND	2.5	
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	
100-01-6	4-Nitroaniline	ND	2.5	
100-02-7	4-Nitrophenol	ND	5.0	
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	
83-32-9	Acenaphthene	ND	2.5	
208-96-8	Acenaphthylene	ND	2.5	
98-86-2	Acetophenone	ND	2.5	
62-53-3	Aniline	ND	2.5	
120-12-7	Anthracene	ND	2.5	
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103-33-3	Azobenzene	ND	2.5
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56-55-3	Benzo(a)anthracene	ND	2.5
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205-99-2	Benzo(b)fluoranthene	ND	2.5
191-24-2	Benzo(g,h,i)perylene	ND	2.5
207-08-9	Benzo(k)fluoranthene	ND	2.5
65-85-0	Benzoic acid	ND	5.0
100-51-6	Benzyl alcohol	ND	2.5
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5
85-68-7	Butylbenzylphthalate	ND	2.5
86-74-8	Carbazole	ND	2.5
510-15-6	Chlorobenzilate	ND	2.5
218-01-9	Chrysene	ND	2.5
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117-84-0	Di-n-octyl phthalate	ND	2.5
53-70-3	Dibenz(a,h)anthracene	ND	2.5
132-64-9	Dibenzofuran	ND	2.5
84-66-2	Diethylphthalate	ND	2.5
131-11-3	Dimethyl phthalate	ND	2.5
88-85-7	Dinoseb	ND	5.0
62-50-0	Ethyl methanesulfonate	ND	2.5
206-44-0	Fluoranthene	ND	2.5
86-73-7	Fluorene	ND	2.5
118-74-1	Hexachlorobenzene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
77-47-4	Hexachlorocyclopentadiene	ND	2.5
67-72-1	Hexachloroethane	ND	2.5
1888-71-7	Hexachloropropene	ND	2.5
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5
465-73-6	Isodrin	ND	2.5
78-59-1	Isophorone	ND	2.5
120-58-1	Isosafrole	ND	2.5
143-50-0	Kepone	ND	5.0
66-27-3	Methyl methanesulfonate	ND	2.5
86-30-6	N-Nitrosodiphenylamine	ND	2.5
621-64-7	N-nitroso-di-n-propylamine	ND	2.5
62-75-9	N-nitrosodimethylamine	ND	2.5
91-20-3	Naphthalene	ND	2.5
98-95-3	Nitrobenzene	ND	2.5
608-93-5	Pentachlorobenzene	ND	2.5
82-68-8	Pentachloronitrobenzene	ND	2.5
87-86-5	Pentachlorophenol	ND	5.0
62-44-2	Phenacetin	ND	2.5
85-01-8	Phenanthrene	ND	2.5
108-95-2	Phenol	ND	2.5
129-00-0	Pyrene	ND	2.5
110-86-1	Pyridine	ND	2.5
94-59-7	Safrole	ND	2.5
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2-Fluorophenol (SS1)	33	12 - 74
Phenol-d6 (SS2)	23	6 - 52
Nitrobenzene-d5 (SS3)	79	32 - 114
2-Fluorobiphenyl (SS4)	83	33 - 119
2,4,6-Tribromophenol (SS5)	54	30 - 144
p-Terphenyl-d14 (SS6)	89	40 - 132

Comments: The following compounds did not meet the initial calibration criterion of % RSD <20 so they were quanitatied using first order linear regression, the RL for these compounds is 5.0ppb; benzoic acid, 4-nitrophenol, 4,6-dinito-2-methyl phenol, pentachlorophenol, dinoseb and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0ppb.

Tentatively Identified Non-Target Compounds

1. Tetrachloroethylene 110ppb J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

BNAs in Water

Client Sample ID:	R01-120314JT-0024	Lab Sample ID:	AB28176
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/22/12	Volume Extracted:	1000 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	
95-50-1	1,2-Dichlorobenzene	ND	2.5	
541-73-1	1,3-Dichlorobenzene	ND	2.5	
99-65-0	1,3-Dinitrobenzene	ND	2.5	
106-46-7	1,4-Dichlorobenzene	ND	2.5	
130-15-4	1,4-Naphthoquinone	ND	2.5	
90-12-0	1-Methylnaphthalene	ND	2.5	
108-60-1	2,2'-oxybis(1-chloropropane)	ND	2.5	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	2.5	
95-95-4	2,4,5-Trichlorophenol	ND	2.5	
88-06-2	2,4,6-Trichlorophenol	ND	2.5	
120-83-2	2,4-Dichlorophenol	ND	2.5	
51-28-5	2,4-Dinitrophenol	ND	10.0	
121-14-2	2,4-Dinitrotoluene	ND	2.5	
105-67-9	2,4-dimethylphenol	ND	2.5	
87-65-0	2,6-Dichlorophenol	ND	2.5	
606-20-2	2,6-Dinitrotoluene	ND	2.5	
91-58-7	2-Chloronaphthalene	ND	2.5	
95-57-8	2-Chlorophenol	ND	2.5	
91-57-6	2-Methylnaphthalene	ND	2.5	
95-48-7	2-Methylphenol	ND	2.5	
88-74-4	2-Nitroaniline	ND	2.5	
88-75-5	2-Nitrophenol	ND	2.5	
108-39-4/106-44-.	3&4-Methylphenol	ND	5.0	
91-94-1	3,3'-Dichlorobenzidine	ND	2.5	
56-49-5	3-Methylcholanthrene	ND	2.5	
99-09-2	3-Nitroaniline	ND	2.5	
534-52-1	4,6-Dinitro-2-methylphenol	ND	5.0	
101-55-3	4-Bromophenyl-phenylether	ND	2.5	
59-50-7	4-Chloro-3-methylphenol	**3.3**	2.5	
106-47-8	4-Chloroaniline	ND	2.5	
7005-72-3	4-Chlorophenyl-phenylether	ND	2.5	
100-01-6	4-Nitroaniline	ND	2.5	
100-02-7	4-Nitrophenol	ND	5.0	
56-57-5	4-nitroquinoline-1-oxide	ND	10.0	
83-32-9	Acenaphthene	ND	2.5	
208-96-8	Acenaphthylene	ND	2.5	
98-86-2	Acetophenone	ND	2.5	
62-53-3	Aniline	ND	2.5	
120-12-7	Anthracene	ND	2.5	
140-57-8	Aramite	ND	2.5	

103-33-3	Azobenzene	ND	2.5
92-87-5	Benzidine	ND	2.5
56-55-3	Benzo(a)anthracene	ND	2.5
50-32-8	Benzo(a)pyrene	ND	2.5
205-99-2	Benzo(b)fluoranthene	ND	2.5
191-24-2	Benzo(g,h,i)perylene	ND	2.5
207-08-9	Benzo(k)fluoranthene	ND	2.5
65-85-0	Benzoic acid	ND	5.0
100-51-6	Benzyl alcohol	ND	2.5
111-44-4	Bis(2-Chloroethyl)ether	ND	2.5
117-81-7	Bis(2-ethylhexyl)phthalate	ND	2.5
85-68-7	Butylbenzylphthalate	ND	2.5
86-74-8	Carbazole	ND	2.5
510-15-6	Chlorobenzilate	ND	2.5
218-01-9	Chrysene	ND	2.5
84-74-2	Di-n-butylphthalate	ND	2.5
117-84-0	Di-n-octyl phthalate	ND	2.5
53-70-3	Dibenz(a,h)anthracene	ND	2.5
132-64-9	Dibenzofuran	ND	2.5
84-66-2	Diethylphthalate	ND	2.5
131-11-3	Dimethyl phthalate	ND	2.5
88-85-7	Dinoseb	ND	5.0
62-50-0	Ethyl methanesulfonate	ND	2.5
206-44-0	Fluoranthene	ND	2.5
86-73-7	Fluorene	ND	2.5
118-74-1	Hexachlorobenzene	ND	2.5
87-68-3	Hexachlorobutadiene	ND	2.5
77-47-4	Hexachlorocyclopentadiene	ND	2.5
67-72-1	Hexachloroethane	ND	2.5
1888-71-7	Hexachloropropene	ND	2.5
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2.5
465-73-6	Isodrin	ND	2.5
78-59-1	Isophorone	ND	2.5
120-58-1	Isosafrole	ND	2.5
143-50-0	Kepone	ND	5.0
66-27-3	Methyl methanesulfonate	ND	2.5
86-30-6	N-Nitrosodiphenylamine	ND	2.5
621-64-7	N-nitroso-di-n-propylamine	ND	2.5
62-75-9	N-nitrosodimethylamine	ND	2.5
91-20-3	Naphthalene	ND	2.5
98-95-3	Nitrobenzene	ND	2.5
608-93-5	Pentachlorobenzene	ND	2.5
82-68-8	Pentachloronitrobenzene	ND	2.5
87-86-5	Pentachlorophenol	ND	5.0
62-44-2	Phenacetin	ND	2.5
85-01-8	Phenanthrene	ND	2.5
108-95-2	Phenol	ND	2.5
129-00-0	Pyrene	ND	2.5
110-86-1	Pyridine	ND	2.5
94-59-7	Safrole	ND	2.5
111-91-1	bis(-2-Chloroethoxy)methane	ND	2.5

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
2-Fluorophenol (SS1)	24	12 - 74
Phenol-d6 (SS2)	16	6 - 52
Nitrobenzene-d5 (SS3)	59	32 - 114
2-Fluorobiphenyl (SS4)	67	33 - 119
2,4,6-Tribromophenol (SS5)	43	30 - 144
p-Terphenyl-d14 (SS6)	74	40 - 132

Comments: The following compounds did not meet the initial calibration criterion of % RSD <20 so they were quanitatied using first order linear regression, the RL for these compounds is 5.0ppb; benzoic acid, 4-nitrophenol, 4,6-dinito-2-methyl phenol, pentachlorophenol, dinoseb and kepone. The RL for 2,4-dinitrophenol and 4-nitroquinoline-1oxide is 10.0ppb.

Tentatively Identified Non-Target Compounds

1. Tetrachloroethylene 43ppb J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

QA/QC RESULTS
LABORATORY FORTIFIED BLANK (LFB) / LABORATORY FORTIFIED BLANK DUPLICATE (LFB Dup)

Sample ID: AB28172

COMPOUND	SPIKE ADDED ug/L	LFB CONCENTRATION ug/L	LFB RECOVERY %	QC LIMITS (% REC)
1,2,4,5-Tetrachlorobenzene	40	22.7	56.8	50 - 104
1,2,4-Trichlorobenzene	40	22.1	55.2	31 - 106
1,2-Dichlorobenzene	40	23.4	58.5	26 - 103
1,3-Dichlorobenzene	40	22.4	56.0	20 - 100
1,3-Dinitrobenzene	40	39.4	98.5	31 - 152
1,4-Dichlorobenzene	40	22.8	57.0	21 - 100
1,4-Naphthoquinone	40	34.4	86.0	52 - 110
1-Methylnaphthalene	40	25.7	64.2	54 - 110
2,2'-oxybis(1-chloropropane)	40	30.1	75.2	43 - 124
2,3,4,6-Tetrachlorophenol	40	35.4	88.5	63 - 127
2,4,5-Trichlorophenol	40	34.9	87.2	62 - 125
2,4,6-Trichlorophenol	40	33.0	82.5	67 - 119
2,4-Dichlorophenol	40	31.8	79.5	64 - 113
2,4-Dinitrophenol	40	27.6	69.0	28 - 139
2,4-Dinitrotoluene	40	36.9	92.2	64 - 131
2,4-dimethylphenol	40	31.6	79.0	21 - 123
2,6-Dichlorophenol	40	31.4	78.5	63 - 111
2,6-Dinitrotoluene	40	35.3	88.2	65 - 127
2-Chloronaphthalene	40	26.1	65.2	50 - 120
2-Chlorophenol	40	29.5	73.8	57 - 105
2-Methylnaphthalene	40	25.8	64.5	53 - 107
2-Methylphenol	40	29.2	73.0	47 - 105
2-Nitroaniline	40	34.2	85.5	58 - 144
2-Nitrophenol	40	31.2	78.0	59 - 124
3&4-Methylphenol	80	56.0	70.0	13 - 144
3,3'-Dichlorobenzidine	40	31.6	79.0	5.0 - 163
3-Methylcholanthrene	0	ND	ND	23 - 166
3-Nitroaniline	40	32.4	81.0	45 - 129
4,6-Dinitro-2-methylphenol	40	31.1	77.8	45 - 128
4-Bromophenyl-phenylether	40	30.5	76.2	63 - 121
4-Chloro-3-methylphenol	40	35.0	87.5	65 - 119
4-Chloroaniline	40	28.5	71.2	7.8 - 122
4-Chlorophenyl-phenylether	40	29.6	74.0	61 - 116
4-Nitroaniline	40	35.2	88.0	41 - 139
4-Nitrophenol	40	20.6	51.5	5.8 - 109
4-nitroquinoline-1-oxide	40	30.5	76.2	38 - 108
Acenaphthene	40	28.8	72.0	61 - 113
Acenaphthylene	40	29.7	74.2	62 - 113
Acetophenone	40	32.5	81.2	61 - 113
Aniline	40	26.2	65.5	17 - 109
Anthracene	40	33.4	83.5	68 - 121

Aramite	40	35.3	88.2	24 - 158
Azobenzene	40	30.7	76.8	60 - 123
Benzidine	40	12.6	31.5	10 - 80
Benzo(a)anthracene	40	32.7	81.8	69 - 119
Benzo(a)pyrene	40	34.3	85.8	57 - 132
Benzo(b)fluoranthene	40	33.6	84.0	55 - 139
Benzo(g,h,i)perylene	40	32.9	82.2	60 - 130
Benzo(k)fluoranthene	40	32.4	81.0	62 - 126
Benzoic acid	40	14.1	35.2	3.7 - 86
Benzyl alcohol	40	21.0	52.5	23 - 133
Bis(2-Chloroethyl)ether	40	30.2	75.5	57 - 111
Bis(2-ethylhexyl)phthalate	40	36.1	90.2	37 - 155
Butylbenzylphthalate	40	36.2	90.5	64 - 133
Carbazole	40	32.2	80.5	62 - 128
Chlorobenzilate	40	35.1	87.8	55 - 146
Chrysene	40	30.7	76.8	71 - 110
Di-n-butylphthalate	40	35.3	88.2	68 - 135
Di-n-octyl phthalate	40	37.7	94.2	35 - 160
Dibenz(a,h)anthracene	40	33.6	84.0	58 - 137
Dibenzofuran	40	29.9	74.8	62 - 113
Diethylphthalate	40	35.2	88.0	56 - 131
Dimethyl phthalate	40	34.2	85.5	64 - 121
Dinoseb	40	32.6	81.5	46 - 121
Ethyl methanesulfonate	40	31.8	79.5	56 - 117
Fluoranthene	40	34.1	85.2	64 - 128
Fluorene	40	31.8	79.5	63 - 119
Hexachlorobenzene	40	29.9	74.8	62 - 118
Hexachlorobutadiene	40	18.7	46.8	9.5 - 107
Hexachlorocyclopentadiene	40	18.0	45.0	11 - 117
Hexachloroethane	40	20.0	50.0	6.9 - 101
Hexachloropropene	40	18.2	45.5	8.1 - 110
Indeno(1,2,3-cd)pyrene	40	33.5	83.8	62 - 129
Isodrin	40	32.7	81.8	63 - 119
Isophorone	40	32.4	81.0	60 - 130
Isosafrole	40	29.7	74.2	59 - 112
Kepone	40	24.1	60.2	8.3 - 117
Methyl methanesulfonate	40	26.8	67.0	37 - 98
N-Nitrosodiphenylamine	40	29.9	74.8	58 - 117
N-nitroso-di-n-propylamine	40	31.6	79.0	58 - 124
N-nitrosodimethylamine	40	20.4	51.0	35 - 72
Naphthalene	40	26.7	66.8	47 - 110
Nitrobenzene	40	31.4	78.5	58 - 115
Pentachlorobenzene	40	28.4	71.0	61 - 112
Pentachloronitrobenzene	40	33.8	84.5	65 - 127
Pentachlorophenol	40	32.8	82.0	11 - 167
Phenacetin	40	37.0	92.5	55 - 143
Phenanthrene	40	31.2	78.0	63 - 122
Phenol	40	16.9	42.2	20 - 64
Pyrene	40	32.5	81.2	68 - 117
Pyridine	40	18.4	46.0	5.3 - 85
Safrole	40	27.0	67.5	56 - 117
bis(-2-Chloroethoxy)methane	40	31.5	78.8	64 - 114

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

BNA MATRIX SPIKE (MS) RESULTS

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28175

COMPOUND	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC	QC LIMITS (% REC)
1,2,4,5-Tetrachlorobenzene	40	ND	29	71	50 - 104
1,2,4-Trichlorobenzene	40	ND	28	71	31 - 106
1,2-Dichlorobenzene	40	ND	27	69	26 - 103
1,3-Dichlorobenzene	40	ND	27	68	20 - 100
1,3-Dinitrobenzene	40	ND	34	85	31 - 152
1,4-Dichlorobenzene	40	ND	27	68	21 - 100
1,4-Naphthoquinone	40	ND	34	84	52 - 110
1-Methylnaphthalene	40	ND	31	76	54 - 110
2,2'-oxybis(1-chloropropane)	40	ND	31	77	43 - 124
2,3,4,6-Tetrachlorophenol	40	ND	33	83	63 - 127
2,4,5-Trichlorophenol	40	ND	35	87	62 - 125
2,4,6-Trichlorophenol	40	ND	34	85	67 - 119
2,4-Dichlorophenol	40	ND	33	83	64 - 113
2,4-Dinitrophenol	40	ND	25	63	28 - 139
2,4-Dinitrotoluene	40	ND	33	84	64 - 131
2,4-dimethylphenol	40	ND	32	80	21 - 123
2,6-Dichlorophenol	40	ND	33	82	63 - 111
2,6-Dinitrotoluene	40	ND	34	86	65 - 127
2-Chloronaphthalene	40	ND	31	77	50 - 120
2-Chlorophenol	40	ND	30	74	57 - 105
2-Methylnaphthalene	40	ND	31	78	53 - 107
2-Methylphenol	40	ND	29	73	47 - 105
2-Nitroaniline	40	ND	32	81	58 - 144
2-Nitrophenol	40	ND	31	78	59 - 124
3&4-Methylphenol	80	ND	56	71	13 - 144
3,3'-Dichlorobenzidine	40	ND	30	74	5.0 - 163
3-Methylcholanthrene	ND	ND	ND	ND	23 - 166
3-Nitroaniline	40	ND	27	67	45 - 129
4,6-Dinitro-2-methylphenol	40	ND	30	75	45 - 128
4-Bromophenyl-phenylether	40	ND	34	85	63 - 121
4-Chloro-3-methylphenol	40	ND	36	90	65 - 119
4-Chloroaniline	40	ND	28	69	7.8 - 122
4-Chlorophenyl-phenylether	40	ND	32	80	61 - 116
4-Nitroaniline	40	ND	28	69	41 - 139
4-Nitrophenol	40	ND	18	44	5.8 - 109
4-nitroquinoline-1-oxide	40	ND	27	67	38 - 108
Acenaphthene	40	ND	32	79	61 - 113
Acenaphthylene	40	ND	32	80	62 - 113
Acetophenone	40	ND	33	83	61 - 113
Aniline	40	ND	24	60	17 - 109
Anthracene	40	ND	35	87	68 - 121
Aramite	40	ND	36	91	24 - 158
Azobenzene	40	ND	35	87	60 - 123
Benzidine	40	ND	2.6	6.5	10 - 80

Benzo(a)anthracene	40	ND	33	83	69 - 119
Benzo(a)pyrene	40	ND	35	88	57 - 132
Benzo(b)fluoranthene	40	ND	34	85	55 - 139
Benzo(g,h,i)perylene	40	ND	35	87	60 - 130
Benzo(k)fluoranthene	40	ND	34	84	62 - 126
Benzoic acid	40	ND	17	42	3.7 - 86
Benzyl alcohol	40	ND	21	52	23 - 133
Bis(2-Chloroethyl)ether	40	ND	31	76	57 - 111
Bis(2-ethylhexyl)phthalate	40	ND	37	92	37 - 155
Butylbenzylphthalate	40	ND	37	93	64 - 133
Carbazole	40	ND	32	81	62 - 128
Chlorobenzilate	40	ND	36	89	55 - 146
Chrysene	40	ND	32	79	71 - 110
Di-n-butylphthalate	40	ND	37	92	68 - 135
Di-n-octyl phthalate	40	ND	39	97	35 - 160
Dibenz(a,h)anthracene	40	ND	36	89	58 - 137
Dibenzofuran	40	ND	32	80	62 - 113
Diethylphthalate	40	ND	33	83	56 - 131
Dimethyl phthalate	40	ND	34	84	64 - 121
Dinoseb	40	ND	31	79	46 - 121
Ethyl methanesulfonate	40	ND	32	80	56 - 117
Fluoranthene	40	ND	35	87	64 - 128
Fluorene	40	ND	33	82	63 - 119
Hexachlorobenzene	40	ND	32	81	62 - 118
Hexachlorobutadiene	40	ND	27	67	9.5 - 107
Hexachlorocyclopentadiene	40	ND	26	65	11 - 117
Hexachloroethane	40	ND	26	66	6.9 - 101
Hexachloropropene	40	ND	28	69	8.1 - 110
Indeno(1,2,3-cd)pyrene	40	ND	35	87	62 - 129
Isodrin	40	ND	34	85	63 - 119
Isophorone	40	ND	33	83	60 - 130
Isosafrole	40	ND	33	82	59 - 112
Kepone	40	ND	24	59	8.3 - 117
Methyl methanesulfonate	40	ND	27	67	37 - 98
N-Nitrosodiphenylamine	40	ND	33	83	58 - 117
N-nitroso-di-n-propylamine	40	ND	32	79	58 - 124
N-nitrosodimethylamine	40	ND	20	49	35 - 72
Naphthalene	40	ND	30	76	47 - 110
Nitrobenzene	40	ND	32	81	58 - 115
Pentachlorobenzene	40	ND	31	78	61 - 112
Pentachloronitrobenzene	40	ND	34	85	65 - 127
Pentachlorophenol	40	ND	33	84	11 - 167
Phenacetin	40	ND	36	91	55 - 143
Phenanthrene	40	ND	33	81	63 - 122
Phenol	40	ND	16	39	20 - 64
Pyrene	40	ND	33	83	68 - 117
Pyridine	40	ND	15	38	5.3 - 85
Safrole	40	ND	28	71	56 - 117
bis(-2-Chloroethoxy)methane	40	ND	32	80	64 - 114

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28172

COMPOUND	SAMPLE RESULT ug/L	SAMPLE DUPLICATE RESULT ug/L	PRECISION RPD %	QC LIMITS
1,2,4,5-Tetrachlorobenzene	ND	ND	NC	50
1,2,4-Trichlorobenzene	ND	ND	NC	50
1,2-Dichlorobenzene	ND	ND	NC	50
1,3-Dichlorobenzene	ND	ND	NC	50
1,3-Dinitrobenzene	ND	ND	NC	50
1,4-Dichlorobenzene	ND	ND	NC	50
1,4-Naphthoquinone	ND	ND	NC	50
1-Methylnaphthalene	ND	ND	NC	50
2,2'-oxybis(1-chloropropane)	ND	ND	NC	50
2,3,4,6-Tetrachlorophenol	ND	ND	NC	50
2,4,5-Trichlorophenol	ND	ND	NC	50
2,4,6-Trichlorophenol	ND	ND	NC	50
2,4-Dichlorophenol	ND	ND	NC	50
2,4-Dinitrophenol	ND	ND	NC	50
2,4-Dinitrotoluene	ND	ND	NC	50
2,4-dimethylphenol	ND	ND	NC	50
2,6-Dichlorophenol	ND	ND	NC	50
2,6-Dinitrotoluene	ND	ND	NC	50
2-Chloronaphthalene	ND	ND	NC	50
2-Chlorophenol	ND	ND	NC	50
2-Methylnaphthalene	ND	ND	NC	50
2-Methylphenol	ND	ND	NC	50
2-Nitroaniline	ND	ND	NC	50
2-Nitrophenol	ND	ND	NC	50
3&4-Methylphenol	ND	ND	NC	50
3,3'-Dichlorobenzidine	ND	ND	NC	50
3-Methylcholanthrene	ND	ND	NC	50
3-Nitroaniline	ND	ND	NC	50
4,6-Dinitro-2-methylphenol	ND	ND	NC	50
4-Bromophenyl-phenylether	ND	ND	NC	50
4-Chloro-3-methylphenol	ND	ND	NC	50
4-Chloroaniline	ND	ND	NC	50
4-Chlorophenyl-phenylether	ND	ND	NC	50
4-Nitroaniline	ND	ND	NC	50
4-Nitrophenol	ND	ND	NC	50
4-nitroquinoline-1-oxide	ND	ND	NC	50
Acenaphthene	ND	ND	NC	50
Acenaphthylene	ND	ND	NC	50
Acetophenone	ND	ND	NC	50
Aniline	ND	ND	NC	50
Anthracene	ND	ND	NC	50
Aramite	ND	ND	NC	50
Azobenzene	ND	ND	NC	50
Benzidine	ND	ND	NC	50
Benzo(a)anthracene	ND	ND	NC	50
Benzo(a)pyrene	ND	ND	NC	50
Benzo(b)fluoranthene	ND	ND	NC	50
Benzo(g,h,i)perylene	ND	ND	NC	50
Benzo(k)fluoranthene	ND	ND	NC	50
Benzoic acid	ND	ND	NC	50

Benzyl alcohol	ND	ND	NC	50
Bis(2-Chloroethyl)ether	ND	ND	NC	50
Bis(2-ethylhexyl)phthalate	ND	ND	NC	50
Butylbenzylphthalate	ND	ND	NC	50
Carbazole	ND	ND	NC	50
Chlorobenzilate	ND	ND	NC	50
Chrysene	ND	ND	NC	50
Di-n-butylphthalate	ND	ND	NC	50
Di-n-octyl phthalate	ND	ND	NC	50
Dibenz(a,h)anthracene	ND	ND	NC	50
Dibenzofuran	ND	ND	NC	50
Diethylphthalate	ND	ND	NC	50
Dimethyl phthalate	ND	ND	NC	50
Dinoseb	ND	ND	NC	50
Ethyl methanesulfonate	ND	ND	NC	50
Fluoranthene	ND	ND	NC	50
Fluorene	ND	ND	NC	50
Hexachlorobenzene	ND	ND	NC	50
Hexachlorobutadiene	ND	ND	NC	50
Hexachlorocyclopentadiene	ND	ND	NC	50
Hexachloroethane	ND	ND	NC	50
Hexachloropropene	ND	ND	NC	50
Indeno(1,2,3-cd)pyrene	ND	ND	NC	50
Isodrin	ND	ND	NC	50
Isophorone	ND	ND	NC	50
Isosafrole	ND	ND	NC	50
Kepone	ND	ND	NC	50
Methyl methanesulfonate	ND	ND	NC	50
N-Nitrosodiphenylamine	ND	ND	NC	50
N-nitroso-di-n-propylamine	ND	ND	NC	50
N-nitrosodimethylamine	ND	ND	NC	50
Naphthalene	ND	ND	NC	50
Nitrobenzene	ND	ND	NC	50
Pentachlorobenzene	ND	ND	NC	50
Pentachloronitrobenzene	ND	ND	NC	50
Pentachlorophenol	ND	ND	NC	50
Phenacetin	ND	ND	NC	50
Phenanthrene	ND	ND	NC	50
Phenol	ND	ND	NC	50
Pyrene	ND	ND	NC	50
Pyridine	ND	ND	NC	50
Safrole	ND	ND	NC	50
bis(-2-Chloroethoxy)methane	ND	ND	NC	50

USEPA Region 1
START III

PN: 12030017

CHAIN OF CUSTODY RECORD
Henry's Dry Cleaners
Contact Name: Janis Tsang
Contact Phone: 617-413-5053

No: 1-032212-201823-0003
Site #: R01-120316TJ
Lab: NERL/OEME
Lab Contact: Doris Guzman

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0012	GW-07 ✓	NW-3B	SVOCs	Ground Water	2012-03-21	11:55	2	1 L Amber		
	R01-120314JT-0012 ✓	GW-07	NW-3B	VOCs	Ground Water	2012-03-21	11:55	4	40 mL Vial	HCl	
	R01-120314JT-0013	GW-08 ✓	NW-3C	SVOCs	Ground Water	2012-03-21	17:20	2	1 L Amber		
	R01-120314JT-0013 ✓	GW-08	NW-3C	VOCs	Ground Water	2012-03-21	17:20	4	40 mL Vial	HCl	
	R01-120314JT-0016	GW-11 ✓	MW-102	SVOCs	Ground Water	2012-03-21	17:20	2	1 L Amber		
	R01-120314JT-0016 ✓	GW-11	MW-102	VOCs	Ground Water	2012-03-21	17:20	4	40 mL Vial	HCl	
	R01-120314JT-0017	GW-12 ✓	MW-101D	SVOCs	Ground Water	2012-03-21	16:45	2	1 L Amber		
	R01-120314JT-0017 ✓	GW-12	MW-101D	VOCs	Ground Water	2012-03-21	16:45	4	40 mL Vial	HCl	
	R01-120314JT-0019	GW-14 ✓	MW-103	SVOCs	Ground Water	2012-03-21	12:50	2	1 L Amber		
	R01-120314JT-0019 ✓	GW-14	MW-103	VOCs	Ground Water	2012-03-21	12:50	4	40 mL Vial	HCl	
	R01-120314JT-0020	GW-15 ✓	MW-102	SVOCs	Ground Water	2012-03-21	17:20	2	1 L Amber		
	R01-120314JT-0020 ✓	GW-15	MW-102	VOCs	Ground Water	2012-03-21	17:20	4	40 mL Vial	HCl	
	R01-120314JT-0024	RB-02 ✓		SVOCs	Equipment Blank	2012-03-21	18:00	2	1 L Amber		
	R01-120314JT-0024 ✓	RB-02		VOCs	Equipment Blank	2012-03-21	18:00	4	40 mL Vial	HCl	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
ALL	[signature]	3/22/12	Paul [signature]	3/22/12	0907	ALL	Paul [signature]	3/22/12	[signature]	3/22/12	1134

Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

April 23, 2012

Janis Tsang - mail Code OSRR02-2
US EPA New England R1

Project Number: 12030029
Project: Henry's Dry Cleaners - Laconia, NH
Analysis: VOAs in Soil High Level Method
Analyst: Joseph Montanaro 04/23/12

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-VOAGCMS9.

Samples were analyzed by GC/MS. Samples were introduced to the GC via a Tekmar preconcentrator and an Archon auto-sampler. The analysis SOP is based on US EPA Method 8260B, revision 2.0, 1996 and Method 5035A, draft revision 1, 2002, from SW-846.

Date Samples Received by the Laboratory: 03/30/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Daniel N. Boudreau 4/25/12

Daniel N. Boudreau
Chemistry Team Leader

Qualifiers:

RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
NC = Not calculated since analyte concentration is ND.
J = Estimated value
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 5 times the concentration in the blank.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0032	Lab Sample ID:	AB28342
Date of Collection:	3/27/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	77%
Dry Weight Extracted:	6.69 grams	Extract Dilution:	50
Wet Weight Extracted:	8.69 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	52	
71-55-6	1,1,1-Trichloroethane	ND	52	
79-34-5	1,1,2,2-Tetrachloroethane	ND	52	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	52	
79-00-5	1,1,2-Trichloroethane	ND	52	
75-35-4	1,1-Dichloroethylene	ND	52	
563-58-6	1,1-Dichloropropene	ND	52	
75-34-3	1,1-dichloroethane	ND	52	
87-61-6	1,2,3-Trichlorobenzene	ND	52	
96-18-4	1,2,3-Trichloropropane	ND	52	
120-82-1	1,2,4-Trichlorobenzene	ND	52	
95-63-6	1,2,4-Trimethylbenzene	ND	52	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	52	
106-93-4	1,2-Dibromoethane	ND	52	
95-50-1	1,2-Dichlorobenzene	ND	52	
107-06-2	1,2-Dichloroethane	ND	52	
78-87-5	1,2-Dichloropropane	ND	52	
108-67-8	1,3,5-Trimethylbenzene	ND	52	
541-73-1	1,3-Dichlorobenzene	ND	52	
142-28-9	1,3-Dichloropropane	ND	52	
106-46-7	1,4-Dichlorobenzene	ND	52	
594-20-7	2,2-Dichloropropane	ND	52	
78-93-3	2-Butanone (MEK)	ND	52	
95-49-8	2-Chlorotoluene	ND	52	
591-78-6	2-Hexanone	ND	52	
67-64-1	2-Propanone (acetone)	ND	52	
106-43-4	4-Chlorotoluene	ND	52	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	52	
107-13-1	Acrylonitrile	ND	52	
71-43-2	Benzene	ND	52	
108-86-1	Bromobenzene	ND	52	
74-97-5	Bromochloromethane	ND	52	
75-27-4	Bromodichloromethane	ND	52	
75-25-2	Bromoform	ND	52	
74-83-9	Bromomethane	ND	52	
75-15-0	Carbon Disulfide	ND	52	
56-23-5	Carbon tetrachloride	ND	52	
108-90-7	Chlorobenzene	ND	52	
75-00-3	Chloroethane	ND	52	

67-66-3	Chloroform	ND	52
74-87-3	Chloromethane	ND	52
124-48-1	Dibromochloromethane	ND	52
74-95-3	Dibromomethane	ND	52
75-71-8	Dichlorodifluoromethane	ND	52
60-29-7	Ethyl Ether	ND	52
100-41-4	Ethylbenzene	ND	52
87-68-3	Hexachlorobutadiene	ND	52
98-82-8	Isopropylbenzene	ND	52
108-38-3/106-42-:	M/P Xylene	ND	100
1634-04-4	Methyl-t-Butyl Ether	ND	52
75-09-2	Methylene Chloride	ND	52
104-51-8	N-Butylbenzene	ND	52
103-65-1	N-Propylbenzene	ND	52
91-20-3	Naphthalene	ND	52
95-47-6	Ortho Xylene	ND	52
99-87-6	Para-Isopropyltoluene	ND	52
135-98-8	Sec-Butylbenzene	ND	52
100-42-5	Styrene	ND	52
98-06-6	Tert-Butylbenzene	ND	52
127-18-4	Tetrachloroethylene	ND	52
109-99-9	Tetrahydrofuran	ND	52
108-88-3	Toluene	ND	52
156-60-5	Trans-1,2-Dichloroethylene	ND	52
79-01-6	Trichloroethylene	ND	52
75-69-4	Trichlorofluoromethane	ND	52
108-05-4	Vinyl Acetate	ND	52
75-01-4	Vinyl Chloride	ND	52
10061-01-5	c-1,3-dichloropropene	ND	52
156-59-2	cis-1,2-Dichloroethylene	ND	52
10061-02-6	t-1,3-Dichloropropene	ND	52

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	94	78 - 111
1,2-Dichloroethane-D4	108	74 - 136
Toluene-D8	102	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	~6

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-:	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	114	74 - 136
Toluene-D8	104	85 - 118
1,4-Bromofluorobenzene	98	78 - 111

Comments: Laboratory blank is reported in ug/L.

Laboratory blank is associated with samples AB28342 (MS/MS and Duplicate Studies), AB28344, and AB28346.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0040	Lab Sample ID:	AB28344
Date of Collection:	3/28/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	88%
Dry Weight Extracted:	6.24 grams	Extract Dilution:	100
Wet Weight Extracted:	7.09 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	94	
71-55-6	1,1,1-Trichloroethane	ND	94	
79-34-5	1,1,2,2-Tetrachloroethane	ND	94	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	94	
79-00-5	1,1,2-Trichloroethane	ND	94	
75-35-4	1,1-Dichloroethylene	ND	94	
563-58-6	1,1-Dichloropropene	ND	94	
75-34-3	1,1-dichloroethane	ND	94	
87-61-6	1,2,3-Trichlorobenzene	ND	94	
96-18-4	1,2,3-Trichloropropane	ND	94	
120-82-1	1,2,4-Trichlorobenzene	ND	94	
95-63-6	1,2,4-Trimethylbenzene	ND	94	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	94	
106-93-4	1,2-Dibromoethane	ND	94	
95-50-1	1,2-Dichlorobenzene	ND	94	
107-06-2	1,2-Dichloroethane	ND	94	
78-87-5	1,2-Dichloropropane	ND	94	
108-67-8	1,3,5-Trimethylbenzene	ND	94	
541-73-1	1,3-Dichlorobenzene	ND	94	
142-28-9	1,3-Dichloropropane	ND	94	
106-46-7	1,4-Dichlorobenzene	ND	94	
594-20-7	2,2-Dichloropropane	ND	94	
78-93-3	2-Butanone (MEK)	ND	94	
95-49-8	2-Chlorotoluene	ND	94	
591-78-6	2-Hexanone	ND	94	
67-64-1	2-Propanone (acetone)	ND	94	
106-43-4	4-Chlorotoluene	ND	94	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	94	
107-13-1	Acrylonitrile	ND	94	
71-43-2	Benzene	ND	94	
108-86-1	Bromobenzene	ND	94	
74-97-5	Bromochloromethane	ND	94	
75-27-4	Bromodichloromethane	ND	94	
75-25-2	Bromoform	ND	94	
74-83-9	Bromomethane	ND	94	
75-15-0	Carbon Disulfide	ND	94	
56-23-5	Carbon tetrachloride	ND	94	
108-90-7	Chlorobenzene	ND	94	
75-00-3	Chloroethane	ND	94	

67-66-3	Chloroform	ND	94
74-87-3	Chloromethane	ND	94
124-48-1	Dibromochloromethane	ND	94
74-95-3	Dibromomethane	ND	94
75-71-8	Dichlorodifluoromethane	ND	94
60-29-7	Ethyl Ether	ND	94
100-41-4	Ethylbenzene	ND	94
87-68-3	Hexachlorobutadiene	ND	94
98-82-8	Isopropylbenzene	ND	94
108-38-3/106-42-3	M/P Xylene	ND	190
1634-04-4	Methyl-t-Butyl Ether	ND	94
75-09-2	Methylene Chloride	ND	94
104-51-8	N-Butylbenzene	ND	94
103-65-1	N-Propylbenzene	ND	94
91-20-3	Naphthalene	ND	94
95-47-6	Ortho Xylene	ND	94
99-87-6	Para-Isopropyltoluene	ND	94
135-98-8	Sec-Butylbenzene	ND	94
100-42-5	Styrene	ND	94
98-06-6	Tert-Butylbenzene	ND	94
127-18-4	Tetrachloroethylene	**490**	94
109-99-9	Tetrahydrofuran	ND	94
108-88-3	Toluene	ND	94
156-60-5	Trans-1,2-Dichloroethylene	ND	94
79-01-6	Trichloroethylene	ND	94
75-69-4	Trichlorofluoromethane	ND	94
108-05-4	Vinyl Acetate	ND	94
75-01-4	Vinyl Chloride	ND	94
10061-01-5	c-1,3-dichloropropene	ND	94
156-59-2	cis-1,2-Dichloroethylene	ND	94
10061-02-6	t-1,3-Dichloropropene	ND	94

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	94	78 - 111
1,2-Dichloroethane-D4	111	74 - 136
Toluene-D8	102	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0054	Lab Sample ID:	AB28346
Date of Collection:	3/28/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	86%
Dry Weight Extracted:	9.15 grams	Extract Dilution:	50
Wet Weight Extracted:	10.64 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	63	
71-55-6	1,1,1-Trichloroethane	ND	63	
79-34-5	1,1,2,2-Tetrachloroethane	ND	63	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	63	
79-00-5	1,1,2-Trichloroethane	ND	63	
75-35-4	1,1-Dichloroethylene	ND	63	
563-58-6	1,1-Dichloropropene	ND	63	
75-34-3	1,1-dichloroethane	ND	63	
87-61-6	1,2,3-Trichlorobenzene	ND	63	
96-18-4	1,2,3-Trichloropropane	ND	63	
120-82-1	1,2,4-Trichlorobenzene	ND	63	
95-63-6	1,2,4-Trimethylbenzene	ND	63	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	63	
106-93-4	1,2-Dibromoethane	ND	63	
95-50-1	1,2-Dichlorobenzene	ND	63	
107-06-2	1,2-Dichloroethane	ND	63	
78-87-5	1,2-Dichloropropane	ND	63	
108-67-8	1,3,5-Trimethylbenzene	ND	63	
541-73-1	1,3-Dichlorobenzene	ND	63	
142-28-9	1,3-Dichloropropane	ND	63	
106-46-7	1,4-Dichlorobenzene	ND	63	
594-20-7	2,2-Dichloropropane	ND	63	
78-93-3	2-Butanone (MEK)	ND	63	
95-49-8	2-Chlorotoluene	ND	63	
591-78-6	2-Hexanone	ND	63	
67-64-1	2-Propanone (acetone)	ND	63	
106-43-4	4-Chlorotoluene	ND	63	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	63	
107-13-1	Acrylonitrile	ND	63	
71-43-2	Benzene	ND	63	
108-86-1	Bromobenzene	ND	63	
74-97-5	Bromochloromethane	ND	63	
75-27-4	Bromodichloromethane	ND	63	
75-25-2	Bromoform	ND	63	
74-83-9	Bromomethane	ND	63	
75-15-0	Carbon Disulfide	ND	63	
56-23-5	Carbon tetrachloride	ND	63	
108-90-7	Chlorobenzene	ND	63	
75-00-3	Chloroethane	ND	63	

67-66-3	Chloroform	ND	63
74-87-3	Chloromethane	ND	63
124-48-1	Dibromochloromethane	ND	63
74-95-3	Dibromomethane	ND	63
75-71-8	Dichlorodifluoromethane	ND	63
60-29-7	Ethyl Ether	ND	63
100-41-4	Ethylbenzene	ND	63
87-68-3	Hexachlorobutadiene	ND	63
98-82-8	Isopropylbenzene	ND	63
108-38-3/106-42-:	M/P Xylene	ND	130
1634-04-4	Methyl-t-Butyl Ether	ND	63
75-09-2	Methylene Chloride	ND	63
104-51-8	N-Butylbenzene	ND	63
103-65-1	N-Propylbenzene	ND	63
91-20-3	Naphthalene	ND	63
95-47-6	Ortho Xylene	ND	63
99-87-6	Para-Isopropyltoluene	ND	63
135-98-8	Sec-Butylbenzene	ND	63
100-42-5	Styrene	ND	63
98-06-6	Tert-Butylbenzene	ND	63
127-18-4	Tetrachloroethylene	**89**	63
109-99-9	Tetrahydrofuran	ND	63
108-88-3	Toluene	ND	63
156-60-5	Trans-1,2-Dichloroethylene	ND	63
79-01-6	Trichloroethylene	ND	63
75-69-4	Trichlorofluoromethane	ND	63
108-05-4	Vinyl Acetate	ND	63
75-01-4	Vinyl Chloride	ND	63
10061-01-5	c-1,3-dichloropropene	ND	63
156-59-2	cis-1,2-Dichloroethylene	ND	63
10061-02-6	t-1,3-Dichloropropene	ND	63

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	94	78 - 111
1,2-Dichloroethane-D4	115	74 - 136
Toluene-D8	102	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0063	Lab Sample ID:	AB28349
Date of Collection:	3/28/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	50
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	
71-55-6	1,1,1-Trichloroethane	ND	50	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	50	
79-00-5	1,1,2-Trichloroethane	ND	50	
75-35-4	1,1-Dichloroethylene	ND	50	
563-58-6	1,1-Dichloropropene	ND	50	
75-34-3	1,1-dichloroethane	ND	50	
87-61-6	1,2,3-Trichlorobenzene	ND	50	
96-18-4	1,2,3-Trichloropropane	ND	50	
120-82-1	1,2,4-Trichlorobenzene	ND	50	
95-63-6	1,2,4-Trimethylbenzene	ND	50	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	50	
106-93-4	1,2-Dibromoethane	ND	50	
95-50-1	1,2-Dichlorobenzene	ND	50	
107-06-2	1,2-Dichloroethane	ND	50	
78-87-5	1,2-Dichloropropane	ND	50	
108-67-8	1,3,5-Trimethylbenzene	ND	50	
541-73-1	1,3-Dichlorobenzene	ND	50	
142-28-9	1,3-Dichloropropane	ND	50	
106-46-7	1,4-Dichlorobenzene	ND	50	
594-20-7	2,2-Dichloropropane	ND	50	
78-93-3	2-Butanone (MEK)	ND	50	
95-49-8	2-Chlorotoluene	ND	50	
591-78-6	2-Hexanone	ND	50	
67-64-1	2-Propanone (acetone)	ND	50	
106-43-4	4-Chlorotoluene	ND	50	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	50	
107-13-1	Acrylonitrile	ND	50	
71-43-2	Benzene	ND	50	
108-86-1	Bromobenzene	ND	50	
74-97-5	Bromochloromethane	ND	50	
75-27-4	Bromodichloromethane	ND	50	
75-25-2	Bromoform	ND	50	
74-83-9	Bromomethane	ND	50	
75-15-0	Carbon Disulfide	ND	50	
56-23-5	Carbon tetrachloride	ND	50	
108-90-7	Chlorobenzene	ND	50	
75-00-3	Chloroethane	ND	50	

67-66-3	Chloroform	ND	50
74-87-3	Chloromethane	ND	50
124-48-1	Dibromochloromethane	ND	50
74-95-3	Dibromomethane	ND	50
75-71-8	Dichlorodifluoromethane	ND	50
60-29-7	Ethyl Ether	ND	50
100-41-4	Ethylbenzene	ND	50
87-68-3	Hexachlorobutadiene	ND	50
98-82-8	Isopropylbenzene	ND	50
108-38-3/106-42-:	M/P Xylene	ND	100
1634-04-4	Methyl-t-Butyl Ether	ND	50
75-09-2	Methylene Chloride	ND	50
104-51-8	N-Butylbenzene	ND	50
103-65-1	N-Propylbenzene	ND	50
91-20-3	Naphthalene	ND	50
95-47-6	Ortho Xylene	ND	50
99-87-6	Para-Isopropyltoluene	ND	50
135-98-8	Sec-Butylbenzene	ND	50
100-42-5	Styrene	ND	50
98-06-6	Tert-Butylbenzene	ND	50
127-18-4	Tetrachloroethylene	ND	50
109-99-9	Tetrahydrofuran	ND	50
108-88-3	Toluene	ND	50
156-60-5	Trans-1,2-Dichloroethylene	ND	50
79-01-6	Trichloroethylene	ND	50
75-69-4	Trichlorofluoromethane	ND	50
108-05-4	Vinyl Acetate	ND	50
75-01-4	Vinyl Chloride	ND	50
10061-01-5	c-1,3-dichloropropene	ND	50
156-59-2	cis-1,2-Dichloroethylene	ND	50
10061-02-6	t-1,3-Dichloropropene	ND	50

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	92	78 - 111
1,2-Dichloroethane-D4	105	74 - 136
Toluene-D8	100	85 - 118

Comments: Methanol based sample is reported in ug/L.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0067	Lab Sample ID:	AB28351
Date of Collection:	3/29/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	91%
Dry Weight Extracted:	5.92 grams	Extract Dilution:	1000
Wet Weight Extracted:	6.51 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	940	
71-55-6	1,1,1-Trichloroethane	ND	940	
79-34-5	1,1,2,2-Tetrachloroethane	ND	940	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	940	
79-00-5	1,1,2-Trichloroethane	ND	940	
75-35-4	1,1-Dichloroethylene	ND	940	
563-58-6	1,1-Dichloropropene	ND	940	
75-34-3	1,1-dichloroethane	ND	940	
87-61-6	1,2,3-Trichlorobenzene	ND	940	
96-18-4	1,2,3-Trichloropropane	ND	940	
120-82-1	1,2,4-Trichlorobenzene	ND	940	
95-63-6	1,2,4-Trimethylbenzene	ND	940	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	940	
106-93-4	1,2-Dibromoethane	ND	940	
95-50-1	1,2-Dichlorobenzene	ND	940	
107-06-2	1,2-Dichloroethane	ND	940	
78-87-5	1,2-Dichloropropane	ND	940	
108-67-8	1,3,5-Trimethylbenzene	ND	940	
541-73-1	1,3-Dichlorobenzene	ND	940	
142-28-9	1,3-Dichloropropane	ND	940	
106-46-7	1,4-Dichlorobenzene	ND	940	
594-20-7	2,2-Dichloropropane	ND	940	
78-93-3	2-Butanone (MEK)	ND	940	
95-49-8	2-Chlorotoluene	ND	940	
591-78-6	2-Hexanone	ND	940	
67-64-1	2-Propanone (acetone)	ND	940	
106-43-4	4-Chlorotoluene	ND	940	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	940	
107-13-1	Acrylonitrile	ND	940	
71-43-2	Benzene	ND	940	
108-86-1	Bromobenzene	ND	940	
74-97-5	Bromochloromethane	ND	940	
75-27-4	Bromodichloromethane	ND	940	
75-25-2	Bromoform	ND	940	
74-83-9	Bromomethane	ND	940	
75-15-0	Carbon Disulfide	ND	940	
56-23-5	Carbon tetrachloride	ND	940	
108-90-7	Chlorobenzene	ND	940	
75-00-3	Chloroethane	ND	940	

67-66-3	Chloroform	ND	940
74-87-3	Chloromethane	ND	940
124-48-1	Dibromochloromethane	ND	940
74-95-3	Dibromomethane	ND	940
75-71-8	Dichlorodifluoromethane	ND	940
60-29-7	Ethyl Ether	ND	940
100-41-4	Ethylbenzene	ND	940
87-68-3	Hexachlorobutadiene	ND	940
98-82-8	Isopropylbenzene	ND	940
108-38-3/106-42-:	M/P Xylene	ND	1900
1634-04-4	Methyl-t-Butyl Ether	ND	940
75-09-2	Methylene Chloride	ND	940
104-51-8	N-Butylbenzene	ND	940
103-65-1	N-Propylbenzene	ND	940
91-20-3	Naphthalene	ND	940
95-47-6	Ortho Xylene	ND	940
99-87-6	Para-Isopropyltoluene	ND	940
135-98-8	Sec-Butylbenzene	ND	940
100-42-5	Styrene	ND	940
98-06-6	Tert-Butylbenzene	ND	940
127-18-4	Tetrachloroethylene	**16000**	940
109-99-9	Tetrahydrofuran	ND	940
108-88-3	Toluene	ND	940
156-60-5	Trans-1,2-Dichloroethylene	ND	940
79-01-6	Trichloroethylene	ND	940
75-69-4	Trichlorofluoromethane	ND	940
108-05-4	Vinyl Acetate	ND	940
75-01-4	Vinyl Chloride	ND	940
10061-01-5	c-1,3-dichloropropene	ND	940
156-59-2	cis-1,2-Dichloroethylene	ND	940
10061-02-6	t-1,3-Dichloropropene	ND	940

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	95	78 - 111
1,2-Dichloroethane-D4	119	74 - 136
Toluene-D8	104	85 - 118

Comments:

Tentatively Identified Compounds	Concentration ug/Kg	Qualifier
1-ethyl-2,2,6-trimethylcyclohexane	9400	J
2-methyl-trans-decalin	13000	J
decahydro-2-methylnaphthalene	24000	J
2-butyl-1,1,3-trimethyl-cyclohexane	12000	J
1,1,2-trimethyl-cycloundecane	9300	J
2,7,10-trimethyl-dodecane	11000	J
Decahydro-4,4,8,9,10-pentamethylnaphthalene	14000	J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	~6

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-3	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	120	74 - 136
Toluene-D8	103	85 - 118
1,4-Bromofluorobenzene	94	78 - 111

Comments: Laboratory blank is reported in ug/L.

Laboratory blank is associated with samples AB28349, AB28351, AB28352, AB28353, AB28355, AB28356, AB28357, AB28358, and AB28360.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0068	Lab Sample ID:	AB28352
Date of Collection:	3/29/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	84%
Dry Weight Extracted:	8.28 grams	Extract Dilution:	100
Wet Weight Extracted:	9.86 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	160	
71-55-6	1,1,1-Trichloroethane	ND	160	
79-34-5	1,1,2,2-Tetrachloroethane	ND	160	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	160	
79-00-5	1,1,2-Trichloroethane	ND	160	
75-35-4	1,1-Dichloroethylene	ND	160	
563-58-6	1,1-Dichloropropene	ND	160	
75-34-3	1,1-dichloroethane	ND	160	
87-61-6	1,2,3-Trichlorobenzene	ND	160	
96-18-4	1,2,3-Trichloropropane	ND	160	
120-82-1	1,2,4-Trichlorobenzene	ND	160	
95-63-6	1,2,4-Trimethylbenzene	ND	160	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	160	
106-93-4	1,2-Dibromoethane	ND	160	
95-50-1	1,2-Dichlorobenzene	ND	160	
107-06-2	1,2-Dichloroethane	ND	160	
78-87-5	1,2-Dichloropropane	ND	160	
108-67-8	1,3,5-Trimethylbenzene	ND	160	
541-73-1	1,3-Dichlorobenzene	ND	160	
142-28-9	1,3-Dichloropropane	ND	160	
106-46-7	1,4-Dichlorobenzene	ND	160	
594-20-7	2,2-Dichloropropane	ND	160	
78-93-3	2-Butanone (MEK)	ND	160	
95-49-8	2-Chlorotoluene	ND	160	
591-78-6	2-Hexanone	ND	160	
67-64-1	2-Propanone (acetone)	ND	160	
106-43-4	4-Chlorotoluene	ND	160	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	160	
107-13-1	Acrylonitrile	ND	160	
71-43-2	Benzene	ND	160	
108-86-1	Bromobenzene	ND	160	
74-97-5	Bromochloromethane	ND	160	
75-27-4	Bromodichloromethane	ND	160	
75-25-2	Bromoform	ND	160	
74-83-9	Bromomethane	ND	160	
75-15-0	Carbon Disulfide	ND	160	
56-23-5	Carbon tetrachloride	ND	160	
108-90-7	Chlorobenzene	ND	160	
75-00-3	Chloroethane	ND	160	

67-66-3	Chloroform	ND	160
74-87-3	Chloromethane	ND	160
124-48-1	Dibromochloromethane	ND	160
74-95-3	Dibromomethane	ND	160
75-71-8	Dichlorodifluoromethane	ND	160
60-29-7	Ethyl Ether	ND	160
100-41-4	Ethylbenzene	ND	160
87-68-3	Hexachlorobutadiene	ND	160
98-82-8	Isopropylbenzene	ND	160
108-38-3/106-42-:	M/P Xylene	ND	320
1634-04-4	Methyl-t-Butyl Ether	ND	160
75-09-2	Methylene Chloride	ND	160
104-51-8	N-Butylbenzene	ND	160
103-65-1	N-Propylbenzene	ND	160
91-20-3	Naphthalene	ND	160
95-47-6	Ortho Xylene	ND	160
99-87-6	Para-Isopropyltoluene	ND	160
135-98-8	Sec-Butylbenzene	**400**	160
100-42-5	Styrene	ND	160
98-06-6	Tert-Butylbenzene	ND	160
127-18-4	Tetrachloroethylene	**240**	160
109-99-9	Tetrahydrofuran	ND	160
108-88-3	Toluene	ND	160
156-60-5	Trans-1,2-Dichloroethylene	ND	160
79-01-6	Trichloroethylene	ND	160
75-69-4	Trichlorofluoromethane	ND	160
108-05-4	Vinyl Acetate	ND	160
75-01-4	Vinyl Chloride	ND	160
10061-01-5	c-1,3-dichloropropene	ND	160
156-59-2	cis-1,2-Dichloroethylene	ND	160
10061-02-6	t-1,3-Dichloropropene	ND	160

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	96	78 - 111
1,2-Dichloroethane-D4	111	74 - 136
Toluene-D8	103	85 - 118

Comments:

Tentatively Identified Compounds	Concentration ug/Kg	Qualifier
4-propylheptane	15100	J
1-methylethyl-cyclohexane	17000	J
4-methylnonane	8900	J
3-methylnonane	13000	J
2,6-dimethyl-2-octene	13000	J
1-methyl-4-(1-methylethyl)-cis-cyclhexane	10000	J
4-methyldecane	28000	J
2-methyl-trans-decalin	12000	J
2,6-dimethyl-undecane	8200	J
2-methyl-octane	8000	J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0074	Lab Sample ID:	AB28353
Date of Collection:	3/29/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	87%
Dry Weight Extracted:	7.93 grams	Extract Dilution:	200
Wet Weight Extracted:	9.12 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	160	
71-55-6	1,1,1-Trichloroethane	ND	160	
79-34-5	1,1,2,2-Tetrachloroethane	ND	160	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	160	
79-00-5	1,1,2-Trichloroethane	ND	160	
75-35-4	1,1-Dichloroethylene	ND	160	
563-58-6	1,1-Dichloropropene	ND	160	
75-34-3	1,1-dichloroethane	ND	160	
87-61-6	1,2,3-Trichlorobenzene	ND	160	
96-18-4	1,2,3-Trichloropropane	ND	160	
120-82-1	1,2,4-Trichlorobenzene	ND	160	
95-63-6	1,2,4-Trimethylbenzene	ND	160	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	160	
106-93-4	1,2-Dibromoethane	ND	160	
95-50-1	1,2-Dichlorobenzene	ND	160	
107-06-2	1,2-Dichloroethane	ND	160	
78-87-5	1,2-Dichloropropane	ND	160	
108-67-8	1,3,5-Trimethylbenzene	ND	160	
541-73-1	1,3-Dichlorobenzene	ND	160	
142-28-9	1,3-Dichloropropane	ND	160	
106-46-7	1,4-Dichlorobenzene	ND	160	
594-20-7	2,2-Dichloropropane	ND	160	
78-93-3	2-Butanone (MEK)	ND	160	
95-49-8	2-Chlorotoluene	ND	160	
591-78-6	2-Hexanone	ND	160	
67-64-1	2-Propanone (acetone)	ND	160	
106-43-4	4-Chlorotoluene	ND	160	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	160	
107-13-1	Acrylonitrile	ND	160	
71-43-2	Benzene	ND	160	
108-86-1	Bromobenzene	ND	160	
74-97-5	Bromochloromethane	ND	160	
75-27-4	Bromodichloromethane	ND	160	
75-25-2	Bromoform	ND	160	
74-83-9	Bromomethane	ND	160	
75-15-0	Carbon Disulfide	ND	160	
56-23-5	Carbon tetrachloride	ND	160	
108-90-7	Chlorobenzene	ND	160	
75-00-3	Chloroethane	ND	160	

67-66-3	Chloroform	ND	160
74-87-3	Chloromethane	ND	160
124-48-1	Dibromochloromethane	ND	160
74-95-3	Dibromomethane	ND	160
75-71-8	Dichlorodifluoromethane	ND	160
60-29-7	Ethyl Ether	ND	160
100-41-4	Ethylbenzene	ND	160
87-68-3	Hexachlorobutadiene	ND	160
98-82-8	Isopropylbenzene	ND	160
108-38-3/106-42-:	M/P Xylene	ND	310
1634-04-4	Methyl-t-Butyl Ether	ND	160
75-09-2	Methylene Chloride	ND	160
104-51-8	N-Butylbenzene	ND	160
103-65-1	N-Propylbenzene	ND	160
91-20-3	Naphthalene	ND	160
95-47-6	Ortho Xylene	ND	160
99-87-6	Para-Isopropyltoluene	ND	160
135-98-8	Sec-Butylbenzene	ND	160
100-42-5	Styrene	ND	160
98-06-6	Tert-Butylbenzene	ND	160
127-18-4	Tetrachloroethylene	**5500**	160
109-99-9	Tetrahydrofuran	ND	160
108-88-3	Toluene	ND	160
156-60-5	Trans-1,2-Dichloroethylene	ND	160
79-01-6	Trichloroethylene	ND	160
75-69-4	Trichlorofluoromethane	ND	160
108-05-4	Vinyl Acetate	ND	160
75-01-4	Vinyl Chloride	ND	160
10061-01-5	c-1,3-dichloropropene	ND	160
156-59-2	cis-1,2-Dichloroethylene	ND	160
10061-02-6	t-1,3-Dichloropropene	ND	160

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	96	78 - 111
1,2-Dichloroethane-D4	113	74 - 136
Toluene-D8	102	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0084	Lab Sample ID:	AB28355
Date of Collection:	3/29/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	91%
Dry Weight Extracted:	4.74 grams	Extract Dilution:	2000
Wet Weight Extracted:	5.21 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	2300	
71-55-6	1,1,1-Trichloroethane	ND	2300	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2300	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	2300	
79-00-5	1,1,2-Trichloroethane	ND	2300	
75-35-4	1,1-Dichloroethylene	ND	2300	
563-58-6	1,1-Dichloropropene	ND	2300	
75-34-3	1,1-dichloroethane	ND	2300	
87-61-6	1,2,3-Trichlorobenzene	ND	2300	
96-18-4	1,2,3-Trichloropropane	ND	2300	
120-82-1	1,2,4-Trichlorobenzene	ND	2300	
95-63-6	1,2,4-Trimethylbenzene	ND	2300	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	2300	
106-93-4	1,2-Dibromoethane	ND	2300	
95-50-1	1,2-Dichlorobenzene	ND	2300	
107-06-2	1,2-Dichloroethane	ND	2300	
78-87-5	1,2-Dichloropropane	ND	2300	
108-67-8	1,3,5-Trimethylbenzene	ND	2300	
541-73-1	1,3-Dichlorobenzene	ND	2300	
142-28-9	1,3-Dichloropropane	ND	2300	
106-46-7	1,4-Dichlorobenzene	ND	2300	
594-20-7	2,2-Dichloropropane	ND	2300	
78-93-3	2-Butanone (MEK)	ND	2300	
95-49-8	2-Chlorotoluene	ND	2300	
591-78-6	2-Hexanone	ND	2300	
67-64-1	2-Propanone (acetone)	ND	2300	
106-43-4	4-Chlorotoluene	ND	2300	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	2300	
107-13-1	Acrylonitrile	ND	2300	
71-43-2	Benzene	ND	2300	
108-86-1	Bromobenzene	ND	2300	
74-97-5	Bromochloromethane	ND	2300	
75-27-4	Bromodichloromethane	ND	2300	
75-25-2	Bromoform	ND	2300	
74-83-9	Bromomethane	ND	2300	
75-15-0	Carbon Disulfide	ND	2300	
56-23-5	Carbon tetrachloride	ND	2300	
108-90-7	Chlorobenzene	ND	2300	
75-00-3	Chloroethane	ND	2300	

67-66-3	Chloroform	ND	2300
74-87-3	Chloromethane	ND	2300
124-48-1	Dibromochloromethane	ND	2300
74-95-3	Dibromomethane	ND	2300
75-71-8	Dichlorodifluoromethane	ND	2300
60-29-7	Ethyl Ether	ND	2300
100-41-4	Ethylbenzene	ND	2300
87-68-3	Hexachlorobutadiene	ND	2300
98-82-8	Isopropylbenzene	ND	2300
108-38-3/106-42-:	M/P Xylene	ND	4600
1634-04-4	Methyl-t-Butyl Ether	ND	2300
75-09-2	Methylene Chloride	ND	2300
104-51-8	N-Butylbenzene	ND	2300
103-65-1	N-Propylbenzene	ND	2300
91-20-3	Naphthalene	ND	2300
95-47-6	Ortho Xylene	ND	2300
99-87-6	Para-Isopropyltoluene	ND	2300
135-98-8	Sec-Butylbenzene	ND	2300
100-42-5	Styrene	ND	2300
98-06-6	Tert-Butylbenzene	ND	2300
127-18-4	Tetrachloroethylene	**34000**	2300
109-99-9	Tetrahydrofuran	ND	2300
108-88-3	Toluene	ND	2300
156-60-5	Trans-1,2-Dichloroethylene	ND	2300
79-01-6	Trichloroethylene	ND	2300
75-69-4	Trichlorofluoromethane	ND	2300
108-05-4	Vinyl Acetate	ND	2300
75-01-4	Vinyl Chloride	ND	2300
10061-01-5	c-1,3-dichloropropene	ND	2300
156-59-2	cis-1,2-Dichloroethylene	ND	2300
10061-02-6	t-1,3-Dichloropropene	ND	2300

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	94	78 - 111
1,2-Dichloroethane-D4	112	74 - 136
Toluene-D8	102	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0086	Lab Sample ID:	AB28356
Date of Collection:	3/29/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	89%
Dry Weight Extracted:	8.98 grams	Extract Dilution:	2000
Wet Weight Extracted:	10.09 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1400	
71-55-6	1,1,1-Trichloroethane	ND	1400	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1400	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1400	
79-00-5	1,1,2-Trichloroethane	ND	1400	
75-35-4	1,1-Dichloroethylene	ND	1400	
563-58-6	1,1-Dichloropropene	ND	1400	
75-34-3	1,1-dichloroethane	ND	1400	
87-61-6	1,2,3-Trichlorobenzene	ND	1400	
96-18-4	1,2,3-Trichloropropane	ND	1400	
120-82-1	1,2,4-Trichlorobenzene	ND	1400	
95-63-6	1,2,4-Trimethylbenzene	ND	1400	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1400	
106-93-4	1,2-Dibromoethane	ND	1400	
95-50-1	1,2-Dichlorobenzene	ND	1400	
107-06-2	1,2-Dichloroethane	ND	1400	
78-87-5	1,2-Dichloropropane	ND	1400	
108-67-8	1,3,5-Trimethylbenzene	ND	1400	
541-73-1	1,3-Dichlorobenzene	ND	1400	
142-28-9	1,3-Dichloropropane	ND	1400	
106-46-7	1,4-Dichlorobenzene	ND	1400	
594-20-7	2,2-Dichloropropane	ND	1400	
78-93-3	2-Butanone (MEK)	ND	1400	
95-49-8	2-Chlorotoluene	ND	1400	
591-78-6	2-Hexanone	ND	1400	
67-64-1	2-Propanone (acetone)	ND	1400	
106-43-4	4-Chlorotoluene	ND	1400	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1400	
107-13-1	Acrylonitrile	ND	1400	
71-43-2	Benzene	ND	1400	
108-86-1	Bromobenzene	ND	1400	
74-97-5	Bromochloromethane	ND	1400	
75-27-4	Bromodichloromethane	ND	1400	
75-25-2	Bromoform	ND	1400	
74-83-9	Bromomethane	ND	1400	
75-15-0	Carbon Disulfide	ND	1400	
56-23-5	Carbon tetrachloride	ND	1400	
108-90-7	Chlorobenzene	ND	1400	
75-00-3	Chloroethane	ND	1400	

67-66-3	Chloroform	ND	1400
74-87-3	Chloromethane	ND	1400
124-48-1	Dibromochloromethane	ND	1400
74-95-3	Dibromomethane	ND	1400
75-71-8	Dichlorodifluoromethane	ND	1400
60-29-7	Ethyl Ether	ND	1400
100-41-4	Ethylbenzene	ND	1400
87-68-3	Hexachlorobutadiene	ND	1400
98-82-8	Isopropylbenzene	ND	1400
108-38-3/106-42-:	M/P Xylene	ND	2700
1634-04-4	Methyl-t-Butyl Ether	ND	1400
75-09-2	Methylene Chloride	ND	1400
104-51-8	N-Butylbenzene	ND	1400
103-65-1	N-Propylbenzene	ND	1400
91-20-3	Naphthalene	ND	1400
95-47-6	Ortho Xylene	ND	1400
99-87-6	Para-Isopropyltoluene	ND	1400
135-98-8	Sec-Butylbenzene	ND	1400
100-42-5	Styrene	ND	1400
98-06-6	Tert-Butylbenzene	ND	1400
127-18-4	Tetrachloroethylene	**35000**	1400
109-99-9	Tetrahydrofuran	ND	1400
108-88-3	Toluene	ND	1400
156-60-5	Trans-1,2-Dichloroethylene	ND	1400
79-01-6	Trichloroethylene	ND	1400
75-69-4	Trichlorofluoromethane	ND	1400
108-05-4	Vinyl Acetate	ND	1400
75-01-4	Vinyl Chloride	ND	1400
10061-01-5	c-1,3-dichloropropene	ND	1400
156-59-2	cis-1,2-Dichloroethylene	ND	1400
10061-02-6	t-1,3-Dichloropropene	ND	1400

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	94	78 - 111
1,2-Dichloroethane-D4	111	74 - 136
Toluene-D8	102	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0093	Lab Sample ID:	AB28357
Date of Collection:	3/30/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	82%
Dry Weight Extracted:	7.47 grams	Extract Dilution:	200
Wet Weight Extracted:	9.11 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	180	
71-55-6	1,1,1-Trichloroethane	ND	180	
79-34-5	1,1,2,2-Tetrachloroethane	ND	180	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	180	
79-00-5	1,1,2-Trichloroethane	ND	180	
75-35-4	1,1-Dichloroethylene	ND	180	
563-58-6	1,1-Dichloropropene	ND	180	
75-34-3	1,1-dichloroethane	ND	180	
87-61-6	1,2,3-Trichlorobenzene	ND	180	
96-18-4	1,2,3-Trichloropropane	ND	180	
120-82-1	1,2,4-Trichlorobenzene	ND	180	
95-63-6	1,2,4-Trimethylbenzene	ND	180	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	180	
106-93-4	1,2-Dibromoethane	ND	180	
95-50-1	1,2-Dichlorobenzene	ND	180	
107-06-2	1,2-Dichloroethane	ND	180	
78-87-5	1,2-Dichloropropane	ND	180	
108-67-8	1,3,5-Trimethylbenzene	ND	180	
541-73-1	1,3-Dichlorobenzene	ND	180	
142-28-9	1,3-Dichloropropane	ND	180	
106-46-7	1,4-Dichlorobenzene	ND	180	
594-20-7	2,2-Dichloropropane	ND	180	
78-93-3	2-Butanone (MEK)	ND	180	
95-49-8	2-Chlorotoluene	ND	180	
591-78-6	2-Hexanone	ND	180	
67-64-1	2-Propanone (acetone)	ND	180	
106-43-4	4-Chlorotoluene	ND	180	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	180	
107-13-1	Acrylonitrile	ND	180	
71-43-2	Benzene	ND	180	
108-86-1	Bromobenzene	ND	180	
74-97-5	Bromochloromethane	ND	180	
75-27-4	Bromodichloromethane	ND	180	
75-25-2	Bromoform	ND	180	
74-83-9	Bromomethane	ND	180	
75-15-0	Carbon Disulfide	ND	180	
56-23-5	Carbon tetrachloride	ND	180	
108-90-7	Chlorobenzene	ND	180	
75-00-3	Chloroethane	ND	180	

67-66-3	Chloroform	ND	180
74-87-3	Chloromethane	ND	180
124-48-1	Dibromochloromethane	ND	180
74-95-3	Dibromomethane	ND	180
75-71-8	Dichlorodifluoromethane	ND	180
60-29-7	Ethyl Ether	ND	180
100-41-4	Ethylbenzene	ND	180
87-68-3	Hexachlorobutadiene	ND	180
98-82-8	Isopropylbenzene	ND	180
108-38-3/106-42-:	M/P Xylene	ND	360
1634-04-4	Methyl-t-Butyl Ether	ND	180
75-09-2	Methylene Chloride	ND	180
104-51-8	N-Butylbenzene	ND	180
103-65-1	N-Propylbenzene	ND	180
91-20-3	Naphthalene	ND	180
95-47-6	Ortho Xylene	ND	180
99-87-6	Para-Isopropyltoluene	ND	180
135-98-8	Sec-Butylbenzene	ND	180
100-42-5	Styrene	ND	180
98-06-6	Tert-Butylbenzene	ND	180
127-18-4	Tetrachloroethylene	**1500**	180
109-99-9	Tetrahydrofuran	ND	180
108-88-3	Toluene	ND	180
156-60-5	Trans-1,2-Dichloroethylene	ND	180
79-01-6	Trichloroethylene	ND	180
75-69-4	Trichlorofluoromethane	ND	180
108-05-4	Vinyl Acetate	ND	180
75-01-4	Vinyl Chloride	ND	180
10061-01-5	c-1,3-dichloropropene	ND	180
156-59-2	cis-1,2-Dichloroethylene	ND	180
10061-02-6	t-1,3-Dichloropropene	ND	180

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	92	78 - 111
1,2-Dichloroethane-D4	109	74 - 136
Toluene-D8	100	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0099	Lab Sample ID:	AB28358
Date of Collection:	3/30/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	100%
Dry Weight Extracted:	5.00 grams	Extract Dilution:	1
Wet Weight Extracted:	5.00 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	
71-55-6	1,1,1-Trichloroethane	**6700**	500	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	50	
79-00-5	1,1,2-Trichloroethane	**3500**	50	
75-35-4	1,1-Dichloroethylene	ND	50	
563-58-6	1,1-Dichloropropene	ND	50	
75-34-3	1,1-dichloroethane	ND	50	
87-61-6	1,2,3-Trichlorobenzene	**3600**	50	
96-18-4	1,2,3-Trichloropropane	ND	50	
120-82-1	1,2,4-Trichlorobenzene	**4900**	500	
95-63-6	1,2,4-Trimethylbenzene	ND	50	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	50	
106-93-4	1,2-Dibromoethane	**3000**	50	
95-50-1	1,2-Dichlorobenzene	**1600**	50	
107-06-2	1,2-Dichloroethane	ND	50	
78-87-5	1,2-Dichloropropane	**4900**	50	
108-67-8	1,3,5-Trimethylbenzene	ND	50	
541-73-1	1,3-Dichlorobenzene	**3500**	50	
142-28-9	1,3-Dichloropropane	ND	50	
106-46-7	1,4-Dichlorobenzene	**2700**	50	
594-20-7	2,2-Dichloropropane	ND	50	
78-93-3	2-Butanone (MEK)	ND	50	
95-49-8	2-Chlorotoluene	ND	50	
591-78-6	2-Hexanone	**5500**	500	
67-64-1	2-Propanone (acetone)	**9400**	500	J
106-43-4	4-Chlorotoluene	ND	50	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	50	
107-13-1	Acrylonitrile	ND	50	
71-43-2	Benzene	**5300**	500	
108-86-1	Bromobenzene	ND	50	
74-97-5	Bromochloromethane	ND	50	
75-27-4	Bromodichloromethane	**3500**	50	
75-25-2	Bromoform	ND	50	
74-83-9	Bromomethane	ND	50	
75-15-0	Carbon Disulfide	ND	50	
56-23-5	Carbon tetrachloride	ND	50	
108-90-7	Chlorobenzene	**4900**	500	
75-00-3	Chloroethane	ND	50	

67-66-3	Chloroform	ND	50
74-87-3	Chloromethane	ND	50
124-48-1	Dibromochloromethane	ND	50
74-95-3	Dibromomethane	ND	50
75-71-8	Dichlorodifluoromethane	ND	50
60-29-7	Ethyl Ether	ND	50
100-41-4	Ethylbenzene	**4900**	50
87-68-3	Hexachlorobutadiene	ND	50
98-82-8	Isopropylbenzene	**5900**	500
108-38-3/106-42-:	M/P Xylene	**6700**	100
1634-04-4	Methyl-t-Butyl Ether	ND	50
75-09-2	Methylene Chloride	ND	50
104-51-8	N-Butylbenzene	ND	50
103-65-1	N-Propylbenzene	ND	50
91-20-3	Naphthalene	ND	50
95-47-6	Ortho Xylene	**1200**	50
99-87-6	Para-Isopropyltoluene	ND	50
135-98-8	Sec-Butylbenzene	ND	50
100-42-5	Styrene	**4400**	50
98-06-6	Tert-Butylbenzene	ND	50
127-18-4	Tetrachloroethylene	**4000**	50
109-99-9	Tetrahydrofuran	ND	50
108-88-3	Toluene	**6300**	500
156-60-5	Trans-1,2-Dichloroethylene	**5300**	500
79-01-6	Trichloroethylene	**8800**	500
75-69-4	Trichlorofluoromethane	ND	50
108-05-4	Vinyl Acetate	ND	50
75-01-4	Vinyl Chloride	ND	50
10061-01-5	c-1,3-dichloropropene	ND	50
156-59-2	cis-1,2-Dichloroethylene	ND	50
10061-02-6	t-1,3-Dichloropropene	ND	50

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	100	78 - 111
1,2-Dichloroethane-D4	102	74 - 136
Toluene-D8	101	85 - 118

Comments: A number of compounds are reported from a five-hundred fold dilution.

Acetone did not meet the criteria for continuous calibration and is qualified with a J.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Soil High Level Method

Client Sample ID:	R01-120314JT-0101	Lab Sample ID:	AB28360
Date of Collection:	3/30/2012	Matrix	Soil
Date of Extraction:	4/2/12	Volume Purged:	5 mL
Date of Analysis:	4/2/12	Percent Solids:	89%
Dry Weight Extracted:	8.49 grams	Extract Dilution:	200
Wet Weight Extracted:	9.54 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	140	
71-55-6	1,1,1-Trichloroethane	ND	140	
79-34-5	1,1,2,2-Tetrachloroethane	ND	140	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	140	
79-00-5	1,1,2-Trichloroethane	ND	140	
75-35-4	1,1-Dichloroethylene	ND	140	
563-58-6	1,1-Dichloropropene	ND	140	
75-34-3	1,1-dichloroethane	ND	140	
87-61-6	1,2,3-Trichlorobenzene	ND	140	
96-18-4	1,2,3-Trichloropropane	ND	140	
120-82-1	1,2,4-Trichlorobenzene	ND	140	
95-63-6	1,2,4-Trimethylbenzene	ND	140	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	140	
106-93-4	1,2-Dibromoethane	ND	140	
95-50-1	1,2-Dichlorobenzene	ND	140	
107-06-2	1,2-Dichloroethane	ND	140	
78-87-5	1,2-Dichloropropane	ND	140	
108-67-8	1,3,5-Trimethylbenzene	ND	140	
541-73-1	1,3-Dichlorobenzene	ND	140	
142-28-9	1,3-Dichloropropane	ND	140	
106-46-7	1,4-Dichlorobenzene	ND	140	
594-20-7	2,2-Dichloropropane	ND	140	
78-93-3	2-Butanone (MEK)	ND	140	
95-49-8	2-Chlorotoluene	ND	140	
591-78-6	2-Hexanone	ND	140	
67-64-1	2-Propanone (acetone)	ND	140	
106-43-4	4-Chlorotoluene	ND	140	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	140	
107-13-1	Acrylonitrile	ND	140	
71-43-2	Benzene	ND	140	
108-86-1	Bromobenzene	ND	140	
74-97-5	Bromochloromethane	ND	140	
75-27-4	Bromodichloromethane	ND	140	
75-25-2	Bromoform	ND	140	
74-83-9	Bromomethane	ND	140	
75-15-0	Carbon Disulfide	ND	140	
56-23-5	Carbon tetrachloride	ND	140	
108-90-7	Chlorobenzene	ND	140	
75-00-3	Chloroethane	ND	140	

67-66-3	Chloroform	ND	140
74-87-3	Chloromethane	ND	140
124-48-1	Dibromochloromethane	ND	140
74-95-3	Dibromomethane	ND	140
75-71-8	Dichlorodifluoromethane	ND	140
60-29-7	Ethyl Ether	ND	140
100-41-4	Ethylbenzene	ND	140
87-68-3	Hexachlorobutadiene	ND	140
98-82-8	Isopropylbenzene	ND	140
108-38-3/106-42-:	M/P Xylene	ND	280
1634-04-4	Methyl-t-Butyl Ether	ND	140
75-09-2	Methylene Chloride	ND	140
104-51-8	N-Butylbenzene	ND	140
103-65-1	N-Propylbenzene	ND	140
91-20-3	Naphthalene	ND	140
95-47-6	Ortho Xylene	ND	140
99-87-6	Para-Isopropyltoluene	ND	140
135-98-8	Sec-Butylbenzene	ND	140
100-42-5	Styrene	ND	140
98-06-6	Tert-Butylbenzene	ND	140
127-18-4	Tetrachloroethylene	**1000**	140
109-99-9	Tetrahydrofuran	ND	140
108-88-3	Toluene	ND	140
156-60-5	Trans-1,2-Dichloroethylene	ND	140
79-01-6	Trichloroethylene	ND	140
75-69-4	Trichlorofluoromethane	ND	140
108-05-4	Vinyl Acetate	ND	140
75-01-4	Vinyl Chloride	ND	140
10061-01-5	c-1,3-dichloropropene	ND	140
156-59-2	cis-1,2-Dichloroethylene	ND	140
10061-02-6	t-1,3-Dichloropropene	ND	140

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,4-Bromofluorobenzene	92	78 - 111
1,2-Dichloroethane-D4	106	74 - 136
Toluene-D8	101	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

VOA MATRIX SPIKE (MS) / MATRIX SPIKE DUPLICATE (MSD) RECOVERY

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28342

PARAMETER	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC	QC LIMITS (% REC)
1,1,1,2-Tetrachloroethane	1,046	ND	880	84	70 - 130
1,1,1-Trichloroethane	1,046	ND	1100	110	70 - 130
1,1,2,2-Tetrachloroethane	1,046	ND	1000	96	70 - 130
1,1,2-Trichloro-1,2,2-Trifluoroetha	1,046	ND	1400	130	70 - 130
1,1,2-Trichloroethane	1,046	ND	1100	110	70 - 130
1,1-Dichloroethylene	1,046	ND	1400	130	80 - 138
1,1-Dichloropropene	1,046	ND	1100	110	70 - 130
1,1-dichloroethane	1,046	ND	1200	110	70 - 130
1,2,3-Trichlorobenzene	1,046	ND	1000	96	70 - 130
1,2,3-Trichloropropane	1,046	ND	970	93	70 - 130
1,2,4-Trichlorobenzene	1,046	ND	1000	96	70 - 130
1,2,4-Trimethylbenzene	1,046	ND	1100	110	70 - 130
1,2-Dibromo-3-Chloropropane	1,046	ND	1100	110	70 - 130
1,2-Dibromoethane	1,046	ND	970	93	70 - 130
1,2-Dichlorobenzene	1,046	ND	1000	96	70 - 130
1,2-Dichloroethane	1,046	ND	1100	110	70 - 130
1,2-Dichloropropane	1,046	ND	1100	110	70 - 130
1,3,5-Trimethylbenzene	1,046	ND	1100	110	70 - 130
1,3-Dichlorobenzene	1,046	ND	1000	96	70 - 130
1,3-Dichloropropane	1,046	ND	1000	96	70 - 130
1,4-Dichlorobenzene	1,046	ND	1000	96	70 - 130
2,2-Dichloropropane	1,046	ND	1000	96	70 - 130
2-Butanone (MEK)	1,046	ND	1100	110	70 - 130
2-Chlorotoluene	1,046	ND	1000	96	70 - 130
2-Hexanone	1,046	ND	1100	110	70 - 130
2-Propanone (acetone)	1,046	ND	1400	130	70 - 130
4-Chlorotoluene	1,046	ND	1000	96	70 - 130
4-Methyl-2-Pentanone(MIBK)	1,046	ND	1100	110	70 - 130
Acrylonitrile	1,046	ND	1100	110	70 - 130
Benzene	1,046	ND	1100	110	87 - 125
Bromobenzene	1,046	ND	990	95	70 - 130
Bromochloromethane	1,046	ND	1000	96	70 - 130
Bromodichloromethane	1,046	ND	1000	96	70 - 130
Bromoform	1,046	ND	820	78	70 - 130
Bromomethane	1,046	ND	1300	120	70 - 130
Carbon Disulfide	1,046	ND	1100	110	70 - 130
Carbon tetrachloride	1,046	ND	920	88	70 - 130
Chlorobenzene	1,046	ND	1100	110	78 - 131
Chloroethane	1,046	ND	1400	130	70 - 130
Chloroform	1,046	ND	1100	110	70 - 130
Chloromethane	1,046	ND	1500	140	70 - 130
Dibromochloromethane	1,046	ND	900	86	70 - 130
Dibromomethane	1,046	ND	1000	96	70 - 130
Dichlorodifluoromethane	1,046	ND	930	89	70 - 130
Ethyl Ether	1,046	ND	1300	120	70 - 130
Ethylbenzene	1,046	ND	1100	110	70 - 130
Hexachlorobutadiene	1,046	ND	1000	96	70 - 130
Isopropylbenzene	1,046	ND	1000	96	70 - 130
M/P Xylene	2,092	ND	2100	100	70 - 130

Methyl-t-Butyl Ether	1,046	ND	980	94	70 - 130
Methylene Chloride	1,046	ND	1300	120	70 - 130
N-Butylbenzene	1,046	ND	1100	110	70 - 130
N-Propylbenzene	1,046	ND	1100	110	70 - 130
Naphthalene	1,046	ND	1000	96	70 - 130
Ortho Xylene	1,046	ND	1000	96	70 - 130
Para-Isopropyltoluene	1,046	ND	1100	110	70 - 130
Sec-Butylbenzene	1,046	ND	1100	110	70 - 130
Styrene	1,046	ND	950	91	70 - 130
Tert-Butylbenzene	1,046	ND	1000	96	70 - 130
Tetrachloroethylene	1,046	ND	980	94	70 - 130
Tetrahydrofuran	1,046	ND	1200	110	70 - 130
Toluene	1,046	ND	1100	110	66 - 150
Trans-1,2-Dichloroethylene	1,046	ND	1100	110	70 - 130
Trichloroethylene	1,046	ND	1000	96	78 - 102
Trichlorofluoromethane	1,046	ND	1400	130	70 - 130
Vinyl Acetate	1,046	ND	1000	96	70 - 130
Vinyl Chloride	1,046	ND	1100	110	70 - 130
c-1,3-dichloropropene	1,046	ND	940	90	70 - 130
cis-1,2-Dichloroethylene	1,046	ND	1100	110	70 - 130
t-1,3-Dichloropropene	1,046	ND	900	86	70 - 130

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Sample ID: AB28342

PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION ug/Kg	MSD % REC	RPD %	QC LIMITS RPD
1,1,1,2-Tetrachloroethane	1,046.0	900	86	2	40
1,1,1-Trichloroethane	1,046.0	1100	110	0	40
1,1,2,2-Tetrachloroethane	1,046.0	1200	110	14	40
1,1,2-Trichloro-1,2,2-Trifluoroetha	1,046.0	1000	96	30	40
1,1,2-Trichloroethane	1,046.0	1100	110	0	40
1,1-Dichloroethylene	1,046.0	1200	110	17	52
1,1-Dichloropropene	1,046.0	1100	110	0	40
1,1-dichloroethane	1,046.0	1100	110	0	40
1,2,3-Trichlorobenzene	1,046.0	1000	96	0	40
1,2,3-Trichloropropane	1,046.0	1100	110	17	40
1,2,4-Trichlorobenzene	1,046.0	1000	96	0	40
1,2,4-Trimethylbenzene	1,046.0	1100	110	0	40
1,2-Dibromo-3-Chloropropane	1,046.0	1300	120	9	40
1,2-Dibromoethane	1,046.0	1100	110	17	40
1,2-Dichlorobenzene	1,046.0	1000	96	0	40
1,2-Dichloroethane	1,046.0	1200	110	0	40
1,2-Dichloropropane	1,046.0	1100	110	0	40
1,3,5-Trimethylbenzene	1,046.0	1100	110	0	40
1,3-Dichlorobenzene	1,046.0	1000	96	0	40
1,3-Dichloropropane	1,046.0	1100	110	14	40
1,4-Dichlorobenzene	1,046.0	1000	96	0	40
2,2-Dichloropropane	1,046.0	950	91	5	40
2-Butanone (MEK)	1,046.0	1000	96	14	40
2-Chlorotoluene	1,046.0	1000	96	0	40
2-Hexanone	1,046.0	1100	110	0	40
2-Propanone (acetone)	1,046.0	1400	130	0	40
4-Chlorotoluene	1,046.0	1100	110	14	40
4-Methyl-2-Pentanone(MIBK)	1,046.0	1300	120	9	40
Acrylonitrile	1,046.0	1400	130	17	40
Benzene	1,046.0	1100	110	0	24
Bromobenzene	1,046.0	1000	96	1	40
Bromochloromethane	1,046.0	1100	110	14	40
Bromodichloromethane	1,046.0	1100	110	14	40
Bromoform	1,046.0	910	87	11	40
Bromomethane	1,046.0	890	85	34	40
Carbon Disulfide	1,046.0	1100	110	0	40
Carbon tetrachloride	1,046.0	950	91	3	40
Chlorobenzene	1,046.0	1100	110	0	34
Chloroethane	1,046.0	1200	110	17	40
Chloroform	1,046.0	1100	110	0	40
Chloromethane	1,046.0	1600	150	7	40
Dibromochloromethane	1,046.0	950	91	6	40
Dibromomethane	1,046.0	1100	110	14	40
Dichlorodifluoromethane	1,046.0	910	87	2	40
Ethyl Ether	1,046.0	1700	160	29	40
Ethylbenzene	1,046.0	1100	110	0	40
Hexachlorobutadiene	1,046.0	1000	96	0	40
Isopropylbenzene	1,046.0	1100	110	14	40
M/P Xylene	2,092.0	2100	100	0	40
Methyl-t-Butyl Ether	1,046.0	1000	96	2	40
Methylene Chloride	1,046.0	1200	110	9	40
N-Butylbenzene	1,046.0	1100	110	0	40
N-Propylbenzene	1,046.0	1100	110	0	40
Naphthalene	1,046.0	1200	110	14	40

Ortho Xylene	1,046.0	1000	96	0	40
Para-Isopropyltoluene	1,046.0	1100	110	0	40
Sec-Butylbenzene	1,046.0	1100	110	0	40
Styrene	1,046.0	950	91	0	40
Tert-Butylbenzene	1,046.0	1100	110	14	40
Tetrachloroethylene	1,046.0	1000	96	2	40
Tetrahydrofuran	1,046.0	1400	130	17	40
Toluene	1,046.0	1100	110	0	33
Trans-1,2-Dichloroethylene	1,046.0	1100	110	0	40
Trichloroethylene	1,046.0	1000	96	0	27
Trichlorofluoromethane	1,046.0	1300	120	8	40
Vinyl Acetate	1,046.0	1100	110	14	40
Vinyl Chloride	1,046.0	930	89	21	40
c-1,3-dichloropropene	1,046.0	960	92	2	40
cis-1,2-Dichloroethylene	1,046.0	1100	110	0	40
t-1,3-Dichloropropene	1,046.0	940	90	5	40

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28342

PARAMETER	SAMPLE RESULT ug/Kg	SAMPLE DUPLICATE RESULT ug/Kg	PRECISION RPD %	QC LIMITS
1,1,1,2-Tetrachloroethane	ND	ND	ND	40
1,1,1-Trichloroethane	ND	ND	ND	40
1,1,2,2-Tetrachloroethane	ND	ND	ND	40
1,1,2-Trichloro-1,2,2-Trifluoroeth	ND	ND	ND	40
1,1,2-Trichloroethane	ND	ND	ND	40
1,1-Dichloroethylene	ND	ND	ND	40
1,1-Dichloropropene	ND	ND	ND	40
1,1-dichloroethane	ND	ND	ND	40
1,2,3-Trichlorobenzene	ND	ND	ND	40
1,2,3-Trichloropropane	ND	ND	ND	40
1,2,4-Trichlorobenzene	ND	ND	ND	40
1,2,4-Trimethylbenzene	ND	ND	ND	40
1,2-Dibromo-3-Chloropropane	ND	ND	ND	40
1,2-Dibromoethane	ND	ND	ND	40
1,2-Dichlorobenzene	ND	ND	ND	40
1,2-Dichloroethane	ND	ND	ND	40
1,2-Dichloropropane	ND	ND	ND	40
1,3,5-Trimethylbenzene	ND	ND	ND	40
1,3-Dichlorobenzene	ND	ND	ND	40
1,3-Dichloropropane	ND	ND	ND	40
1,4-Dichlorobenzene	ND	ND	ND	40
2,2-Dichloropropane	ND	ND	ND	40
2-Butanone (MEK)	ND	ND	ND	40
2-Chlorotoluene	ND	ND	ND	40
2-Hexanone	ND	ND	ND	40
2-Propanone (acetone)	ND	ND	ND	40
4-Chlorotoluene	ND	ND	ND	40
4-Methyl-2-Pentanone(MIBK)	ND	ND	ND	40
Acrylonitrile	ND	ND	ND	40
Benzene	ND	ND	ND	40
Bromobenzene	ND	ND	ND	40
Bromochloromethane	ND	ND	ND	40
Bromodichloromethane	ND	ND	ND	40
Bromoform	ND	ND	ND	40
Bromomethane	ND	ND	ND	40
Carbon Disulfide	ND	ND	ND	40
Carbon tetrachloride	ND	ND	ND	40
Chlorobenzene	ND	ND	ND	40
Chloroethane	ND	ND	ND	40
Chloroform	ND	ND	ND	40
Chloromethane	ND	ND	ND	40
Dibromochloromethane	ND	ND	ND	40
Dibromomethane	ND	ND	ND	40
Dichlorodifluoromethane	ND	ND	ND	40
Ethyl Ether	ND	ND	ND	40
Ethylbenzene	ND	ND	ND	40
Hexachlorobutadiene	ND	ND	ND	40
Isopropylbenzene	ND	ND	ND	40
M/P Xylene	ND	ND	ND	40
Methyl-t-Butyl Ether	ND	ND	ND	40

Methylene Chloride	ND	ND	ND	40
N-Butylbenzene	ND	ND	ND	40
N-Propylbenzene	ND	ND	ND	40
Naphthalene	ND	ND	ND	40
Ortho Xylene	ND	ND	ND	40
Para-Isopropyltoluene	ND	ND	ND	40
Sec-Butylbenzene	ND	ND	ND	40
Styrene	ND	ND	ND	40
Tert-Butylbenzene	ND	ND	ND	40
Tetrachloroethylene	ND	ND	ND	40
Tetrahydrofuran	ND	ND	ND	40
Toluene	ND	ND	ND	40
Trans-1,2-Dichloroethylene	ND	ND	ND	40
Trichloroethylene	ND	ND	ND	40
Trichlorofluoromethane	ND	ND	ND	40
Vinyl Acetate	ND	ND	ND	40
Vinyl Chloride	ND	ND	ND	40
c-1,3-dichloropropene	ND	ND	ND	40
cis-1,2-Dichloroethylene	ND	ND	ND	40
t-1,3-Dichloropropene	ND	ND	ND	40

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Fortified Blank (LFB) Results

Henry's Dry Cleaners - Laconia, NH

PARAMETER	LFB AMOUNT SPIKED ug/Kg	LFB RESULT ug/Kg	LFB RECOVERY %	QC LIMITS %
1,1,1,2-Tetrachloroethane	20	18.3	92	60 - 140
1,1,1-Trichloroethane	20	22.4	112	60 - 140
1,1,2,2-Tetrachloroethane	20	19.8	99	60 - 140
1,1,2-Trichloro-1,2,2-Trifluoroeth	20	24.8	124	60 - 140
1,1,2-Trichloroethane	20	20.7	104	60 - 140
1,1-Dichloroethylene	20	23.6	118	7 - 148
1,1-Dichloropropene	20	21.2	106	60 - 140
1,1-dichloroethane	20	22.5	113	60 - 140
1,2,3-Trichlorobenzene	20	19.5	98	60 - 140
1,2,3-Trichloropropane	20	18.8	94	60 - 140
1,2,4-Trichlorobenzene	20	19.5	98	60 - 140
1,2,4-Trimethylbenzene	20	20.7	104	60 - 140
1,2-Dibromo-3-Chloropropane	20	22.4	112	60 - 140
1,2-Dibromoethane	20	19.5	98	60 - 140
1,2-Dichlorobenzene	20	19.5	98	60 - 140
1,2-Dichloroethane	20	21.5	108	60 - 140
1,2-Dichloropropane	20	21.1	106	60 - 140
1,3,5-Trimethylbenzene	20	20.7	104	60 - 140
1,3-Dichlorobenzene	20	19.9	100	60 - 140
1,3-Dichloropropane	20	20.0	100	60 - 140
1,4-Dichlorobenzene	20	19.7	99	60 - 140
2,2-Dichloropropane	20	23.5	118	60 - 140
2-Butanone (MEK)	20	19.3	97	60 - 140
2-Chlorotoluene	20	20.3	102	60 - 140
2-Hexanone	20	21.8	109	60 - 140
2-Propanone (acetone)	20	17.4	87	60 - 140
4-Chlorotoluene	20	20.5	103	60 - 140
4-Methyl-2-Pentanone(MIBK)	20	20.8	104	60 - 140
Acrylonitrile	20	20.1	101	60 - 140
Benzene	20	21.4	107	39 - 119
Bromobenzene	20	19.4	97	60 - 140
Bromochloromethane	20	20.5	103	60 - 140
Bromodichloromethane	20	22.1	111	60 - 140
Bromoform	20	17.3	87	60 - 140
Bromomethane	20	23.6	118	60 - 140
Carbon Disulfide	20	23.4	117	60 - 140
Carbon tetrachloride	20	19.8	99	60 - 140
Chlorobenzene	20	21.3	107	48 - 131
Chloroethane	20	24.6	123	60 - 140
Chloroform	20	21.8	109	60 - 140
Chloromethane	20	22.6	113	60 - 140
Dibromochloromethane	20	18.8	94	60 - 140
Dibromomethane	20	20.0	100	60 - 140
Dichlorodifluoromethane	20	20.6	103	60 - 140
Ethyl Ether	20	20.9	105	60 - 140
Ethylbenzene	20	20.9	105	60 - 140
Hexachlorobutadiene	20	21.2	106	60 - 140
Isopropylbenzene	20	20.7	104	60 - 140
M/P Xylene	40	41.5	104	60 - 140
Methyl-t-Butyl Ether	20	20.5	103	60 - 140
Methylene Chloride	20	23.0	115	60 - 140
N-Butylbenzene	20	21.7	109	60 - 140
N-Propylbenzene	20	21.1	106	60 - 140

Naphthalene	20	19.9	100	60 - 140
Ortho Xylene	20	20.7	104	60 - 140
Para-Isopropyltoluene	20	21.0	105	60 - 140
Sec-Butylbenzene	20	21.0	105	60 - 140
Styrene	20	18.7	94	60 - 140
Tert-Butylbenzene	20	20.6	103	60 - 140
Tetrachloroethylene	20	19.7	99	60 - 140
Tetrahydrofuran	20	20.8	104	60 - 140
Toluene	20	21.3	107	43 - 136
Trans-1,2-Dichloroethylene	20	21.4	107	60 - 140
Trichloroethylene	20	20.7	104	37 - 130
Trichlorofluoromethane	20	24.8	124	60 - 140
Vinyl Acetate	20	22.4	112	60 - 140
Vinyl Chloride	20	25.0	125	60 - 140
c-1,3-dichloropropene	20	19.4	97	60 - 140
cis-1,2-Dichloroethylene	20	21.5	108	60 - 140
t-1,3-Dichloropropene	20	18.8	94	60 - 140

Comments: The percent recoveries for chloromethane and ethyl ether did not meet the acceptable QC criteria in the MS/MS Study.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

LABORATORY FORTIFIED DUPLICATE (LFB Dup) RECOVERY

COMPOUND	LFB Dup CONCENTRATION ug/Kg	LFB Dup RECOVERY %	RPD %	QC LIMITS RPD
1,1,1,2-Tetrachloroethane	17.7	89	3	50
1,1,1-Trichloroethane	21.8	109	3	50
1,1,2,2-Tetrachloroethane	21.9	110	10	50
1,1,2-Trichloro-1,2,2-Trifluoroetha	24.6	123	1	50
1,1,2-Trichloroethane	22.0	110	6	50
1,1-Dichloroethylene	23.6	118	0	52
1,1-Dichloropropene	20.4	102	4	50
1,1-dichloroethane	22.1	111	2	50
1,2,3-Trichlorobenzene	20.4	102	5	50
1,2,3-Trichloropropane	21.1	106	12	50
1,2,4-Trichlorobenzene	19.6	98	1	50
1,2,4-Trimethylbenzene	20.3	102	2	50
1,2-Dibromo-3-Chloropropane	25.6	128	13	50
1,2-Dibromoethane	20.9	105	7	50
1,2-Dichlorobenzene	19.4	97	1	50
1,2-Dichloroethane	22.0	110	2	50
1,2-Dichloropropane	20.3	102	4	50
1,3,5-Trimethylbenzene	20.6	103	1	50
1,3-Dichlorobenzene	19.7	99	1	50
1,3-Dichloropropane	20.8	104	4	50
1,4-Dichlorobenzene	19.3	97	2	50
2,2-Dichloropropane	22.1	111	6	50
2-Butanone (MEK)	22.1	111	14	50
2-Chlorotoluene	19.6	98	4	50
2-Hexanone	24.1	121	10	50
2-Propanone (acetone)	21.8	109	22	50
4-Chlorotoluene	20.4	102	1	50
4-Methyl-2-Pentanone(MIBK)	23.4	117	12	50
Acrylonitrile	23.7	119	16	50
Benzene	21.1	106	1	50
Bromobenzene	19.4	97	0	50
Bromochloromethane	21.0	105	2	50
Bromodichloromethane	21.4	107	3	50
Bromoform	18.4	92	6	50
Bromomethane	24.7	124	5	50
Carbon Disulfide	22.7	114	3	50
Carbon tetrachloride	19.1	96	4	50
Chlorobenzene	21.3	107	0	34
Chloroethane	24.8	124	1	50
Chloroform	21.6	108	1	50
Chloromethane	24.2	121	7	50
Dibromochloromethane	19.4	97	3	50
Dibromomethane	20.7	104	3	50
Dichlorodifluoromethane	19.8	99	4	50
Ethyl Ether	22.6	113	8	50
Ethylbenzene	20.5	103	2	50
Hexachlorobutadiene	20.6	103	3	50
Isopropylbenzene	20.3	102	2	50
M/P Xylene	40.7	102	2	50
Methyl-t-Butyl Ether	21.6	108	5	50
Methylene Chloride	23.0	115	0	50
N-Butylbenzene	20.9	105	4	50
N-Propylbenzene	20.5	103	3	50
Naphthalene	22.2	111	11	50
Ortho Xylene	20.2	101	2	50
Para-Isopropyltoluene	20.6	103	2	50

Sec-Butylbenzene	20.7	104	1	50
Styrene	18.2	91	3	50
Tert-Butylbenzene	20.1	101	3	50
Tetrachloroethylene	19.4	97	2	50
Tetrahydrofuran	25.1	126	19	50
Toluene	21.1	106	1	50
Trans-1,2-Dichloroethylene	20.9	105	2	50
Trichloroethylene	19.8	99	4	27
Trichlorofluoromethane	24.8	124	0	50
Vinyl Acetate	25.1	126	11	50
Vinyl Chloride	24.6	123	2	50
c-1,3-dichloropropene	19.7	99	2	50
cis-1,2-Dichloroethylene	21.2	106	1	50
t-1,3-Dichloropropene	19.6	98	4	50

Samples in Batch: AB28342, AB28344, AB28346, AB28349, AB28351, AB28352, AB28353, AB28355, AB28356, AB28357, AB28358, AB28360

Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

April 04, 2012

Janis Tsang - mail Code OSRR02-2
US EPA New England R1

Project Number: 12030017
Project: Henry's Dry Cleaners - Laconia, NH
Analysis: VOAs in Water
Analyst: Joseph Montanaro 04/04/12

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-VOAGCMS9.

Samples were analyzed by GC/MS. Samples were introduced to the GC via a Tekmar pre-concentrator and an Archon autosampler. The analysis SOP is based on US EPA Method 8260B, method 5030B, rev 2.0 SW-846, Rev 2.0,1996. Method 624, 40CFR Part 136 Appendix A, July 1, 1992, and USEPA CLP SOW for Organic Analysis OLM04.2, 1999.

Date Samples Received by the Laboratory: 03/22/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Daniel N. Boudreau 4/5/12
Daniel N. Boudreau
Chemistry Team Leader

Qualifiers: RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
NC = Not calculated since analyte concentration is ND.
J = Estimated value
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 5 times the concentration in the blank.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0012	Lab Sample ID:	AB28170
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/23/12	Volume Purged:	5 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	100
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	100	
71-55-6	1,1,1-Trichloroethane	ND	100	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	100	
79-00-5	1,1,2-Trichloroethane	ND	100	
75-35-4	1,1-Dichloroethylene	ND	100	
563-58-6	1,1-Dichloropropene	ND	100	
75-34-3	1,1-dichloroethane	ND	100	
87-61-6	1,2,3-Trichlorobenzene	ND	100	
96-18-4	1,2,3-Trichloropropane	ND	100	
120-82-1	1,2,4-Trichlorobenzene	ND	100	
95-63-6	1,2,4-Trimethylbenzene	ND	100	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	100	
106-93-4	1,2-Dibromoethane	ND	100	
95-50-1	1,2-Dichlorobenzene	ND	100	
107-06-2	1,2-Dichloroethane	ND	100	
78-87-5	1,2-Dichloropropane	ND	100	
108-67-8	1,3,5-Trimethylbenzene	ND	100	
541-73-1	1,3-Dichlorobenzene	ND	100	
142-28-9	1,3-Dichloropropane	ND	100	
106-46-7	1,4-Dichlorobenzene	ND	100	
594-20-7	2,2-Dichloropropane	ND	100	
78-93-3	2-Butanone (MEK)	ND	100	
95-49-8	2-Chlorotoluene	ND	100	
591-78-6	2-Hexanone	ND	100	
67-64-1	2-Propanone (acetone)	ND	100	
106-43-4	4-Chlorotoluene	ND	100	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	100	
107-13-1	Acrylonitrile	ND	100	
71-43-2	Benzene	ND	100	
108-86-1	Bromobenzene	ND	100	
74-97-5	Bromochloromethane	ND	100	
75-27-4	Bromodichloromethane	ND	100	
75-25-2	Bromoform	ND	100	
74-83-9	Bromomethane	ND	100	
75-15-0	Carbon Disulfide	ND	100	
56-23-5	Carbon tetrachloride	ND	100	
108-90-7	Chlorobenzene	ND	100	
75-00-3	Chloroethane	ND	100	

67-66-3	Chloroform	ND	100
74-87-3	Chloromethane	ND	100
124-48-1	Dibromochloromethane	ND	100
74-95-3	Dibromomethane	ND	100
75-71-8	Dichlorodifluoromethane	ND	100
60-29-7	Ethyl Ether	ND	100
100-41-4	Ethylbenzene	ND	100
87-68-3	Hexachlorobutadiene	ND	100
98-82-8	Isopropylbenzene	ND	100
108-38-3/106-42-3	M/P Xylene	ND	200
1634-04-4	Methyl-t-Butyl Ether	ND	100
75-09-2	Methylene Chloride	ND	100
104-51-8	N-Butylbenzene	ND	100
103-65-1	N-Propylbenzene	ND	100
91-20-3	Naphthalene	ND	100
95-47-6	Ortho Xylene	ND	100
99-87-6	Para-Isopropyltoluene	ND	100
135-98-8	Sec-Butylbenzene	ND	100
100-42-5	Styrene	ND	100
98-06-6	Tert-Butylbenzene	ND	100
127-18-4	Tetrachloroethylene	**3700**	100
109-99-9	Tetrahydrofuran	ND	100
108-88-3	Toluene	ND	100
156-60-5	Trans-1,2-Dichloroethylene	ND	100
79-01-6	Trichloroethylene	ND	100
75-69-4	Trichlorofluoromethane	ND	100
108-05-4	Vinyl Acetate	ND	100
75-01-4	Vinyl Chloride	ND	100
10061-01-5	c-1,3-dichloropropene	ND	100
156-59-2	cis-1,2-Dichloroethylene	ND	100
10061-02-6	t-1,3-Dichloropropene	ND	100

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	141	74 - 136
Toluene-D8	103	85 - 118
1,4-Bromofluorobenzene	98	78 - 111

Comments: The percent recovery for surrogate compound 1,2-dichloroethane-D4 did not meet the acceptable QC criteria.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

Laboratory Blank for $VOAMW

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	GW
Date of Extraction:	3/23/12	Volume Purged:	5.0 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	~6

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-3	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	138	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	97	78 - 111

Comments: Laboratory blank is associated with samples AB28170 - AB28173 and AB28175 - AB28176.

The percent recovery for surrogate compound 1,2-dichloroethane-D4 did not meet the acceptable QC criteria.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0013	Lab Sample ID:	AB28171
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/23/12	Volume Purged:	5 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1000
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1000	
71-55-6	1,1,1-Trichloroethane	ND	1000	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1000	
79-00-5	1,1,2-Trichloroethane	ND	1000	
75-35-4	1,1-Dichloroethylene	ND	1000	
563-58-6	1,1-Dichloropropene	ND	1000	
75-34-3	1,1-dichloroethane	ND	1000	
87-61-6	1,2,3-Trichlorobenzene	ND	1000	
96-18-4	1,2,3-Trichloropropane	ND	1000	
120-82-1	1,2,4-Trichlorobenzene	ND	1000	
95-63-6	1,2,4-Trimethylbenzene	ND	1000	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1000	
106-93-4	1,2-Dibromoethane	ND	1000	
95-50-1	1,2-Dichlorobenzene	ND	1000	
107-06-2	1,2-Dichloroethane	ND	1000	
78-87-5	1,2-Dichloropropane	ND	1000	
108-67-8	1,3,5-Trimethylbenzene	ND	1000	
541-73-1	1,3-Dichlorobenzene	ND	1000	
142-28-9	1,3-Dichloropropane	ND	1000	
106-46-7	1,4-Dichlorobenzene	ND	1000	
594-20-7	2,2-Dichloropropane	ND	1000	
78-93-3	2-Butanone (MEK)	ND	1000	
95-49-8	2-Chlorotoluene	ND	1000	
591-78-6	2-Hexanone	ND	1000	
67-64-1	2-Propanone (acetone)	ND	1000	
106-43-4	4-Chlorotoluene	ND	1000	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1000	
107-13-1	Acrylonitrile	ND	1000	
71-43-2	Benzene	ND	1000	
108-86-1	Bromobenzene	ND	1000	
74-97-5	Bromochloromethane	ND	1000	
75-27-4	Bromodichloromethane	ND	1000	
75-25-2	Bromoform	ND	1000	
74-83-9	Bromomethane	ND	1000	
75-15-0	Carbon Disulfide	ND	1000	
56-23-5	Carbon tetrachloride	ND	1000	
108-90-7	Chlorobenzene	ND	1000	
75-00-3	Chloroethane	ND	1000	

67-66-3	Chloroform	ND	1000
74-87-3	Chloromethane	ND	1000
124-48-1	Dibromochloromethane	ND	1000
74-95-3	Dibromomethane	ND	1000
75-71-8	Dichlorodifluoromethane	ND	1000
60-29-7	Ethyl Ether	ND	1000
100-41-4	Ethylbenzene	ND	1000
87-68-3	Hexachlorobutadiene	ND	1000
98-82-8	Isopropylbenzene	ND	1000
108-38-3/106-42-3	M/P Xylene	ND	2000
1634-04-4	Methyl-t-Butyl Ether	ND	1000
75-09-2	Methylene Chloride	ND	1000
104-51-8	N-Butylbenzene	ND	1000
103-65-1	N-Propylbenzene	ND	1000
91-20-3	Naphthalene	ND	1000
95-47-6	Ortho Xylene	ND	1000
99-87-6	Para-Isopropyltoluene	ND	1000
135-98-8	Sec-Butylbenzene	ND	1000
100-42-5	Styrene	ND	1000
98-06-6	Tert-Butylbenzene	ND	1000
127-18-4	Tetrachloroethylene	**11000**	1000
109-99-9	Tetrahydrofuran	ND	1000
108-88-3	Toluene	ND	1000
156-60-5	Trans-1,2-Dichloroethylene	ND	1000
79-01-6	Trichloroethylene	ND	1000
75-69-4	Trichlorofluoromethane	ND	1000
108-05-4	Vinyl Acetate	ND	1000
75-01-4	Vinyl Chloride	ND	1000
10061-01-5	c-1,3-dichloropropene	ND	1000
156-59-2	cis-1,2-Dichloroethylene	ND	1000
10061-02-6	t-1,3-Dichloropropene	ND	1000

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	142	74 - 136
Toluene-D8	103	85 - 118
1,4-Bromofluorobenzene	98	78 - 111

Comments: The percent recovery for surrogate compound 1,2-dichloroethane-D4 did not meet the acceptable QC criteria.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0016	Lab Sample ID:	AB28172
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/23/12	Volume Purged:	5 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	10
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	10	
71-55-6	1,1,1-Trichloroethane	ND	10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	10	
79-00-5	1,1,2-Trichloroethane	ND	10	
75-35-4	1,1-Dichloroethylene	ND	10	
563-58-6	1,1-Dichloropropene	ND	10	
75-34-3	1,1-dichloroethane	ND	10	
87-61-6	1,2,3-Trichlorobenzene	ND	10	
96-18-4	1,2,3-Trichloropropane	ND	10	
120-82-1	1,2,4-Trichlorobenzene	ND	10	
95-63-6	1,2,4-Trimethylbenzene	ND	10	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	10	
106-93-4	1,2-Dibromoethane	ND	10	
95-50-1	1,2-Dichlorobenzene	ND	10	
107-06-2	1,2-Dichloroethane	ND	10	
78-87-5	1,2-Dichloropropane	ND	10	
108-67-8	1,3,5-Trimethylbenzene	ND	10	
541-73-1	1,3-Dichlorobenzene	ND	10	
142-28-9	1,3-Dichloropropane	ND	10	
106-46-7	1,4-Dichlorobenzene	ND	10	
594-20-7	2,2-Dichloropropane	ND	10	
78-93-3	2-Butanone (MEK)	ND	10	
95-49-8	2-Chlorotoluene	ND	10	
591-78-6	2-Hexanone	ND	10	
67-64-1	2-Propanone (acetone)	ND	10	
106-43-4	4-Chlorotoluene	ND	10	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	10	
107-13-1	Acrylonitrile	ND	10	
71-43-2	Benzene	ND	10	
108-86-1	Bromobenzene	ND	10	
74-97-5	Bromochloromethane	ND	10	
75-27-4	Bromodichloromethane	ND	10	
75-25-2	Bromoform	ND	10	
74-83-9	Bromomethane	ND	10	
75-15-0	Carbon Disulfide	ND	10	
56-23-5	Carbon tetrachloride	ND	10	
108-90-7	Chlorobenzene	ND	10	
75-00-3	Chloroethane	ND	10	

67-66-3	Chloroform	ND	10
74-87-3	Chloromethane	ND	10
124-48-1	Dibromochloromethane	ND	10
74-95-3	Dibromomethane	ND	10
75-71-8	Dichlorodifluoromethane	ND	10
60-29-7	Ethyl Ether	ND	10
100-41-4	Ethylbenzene	ND	10
87-68-3	Hexachlorobutadiene	ND	10
98-82-8	Isopropylbenzene	ND	10
108-38-3/106-42-:	M/P Xylene	ND	20
1634-04-4	Methyl-t-Butyl Ether	ND	10
75-09-2	Methylene Chloride	ND	10
104-51-8	N-Butylbenzene	ND	10
103-65-1	N-Propylbenzene	ND	10
91-20-3	Naphthalene	ND	10
95-47-6	Ortho Xylene	ND	10
99-87-6	Para-Isopropyltoluene	ND	10
135-98-8	Sec-Butylbenzene	ND	10
100-42-5	Styrene	ND	10
98-06-6	Tert-Butylbenzene	ND	10
127-18-4	Tetrachloroethylene	**400**	10
109-99-9	Tetrahydrofuran	ND	10
108-88-3	Toluene	ND	10
156-60-5	Trans-1,2-Dichloroethylene	ND	10
79-01-6	Trichloroethylene	**10**	10
75-69-4	Trichlorofluoromethane	ND	10
108-05-4	Vinyl Acetate	ND	10
75-01-4	Vinyl Chloride	ND	10
10061-01-5	c-1,3-dichloropropene	ND	10
156-59-2	cis-1,2-Dichloroethylene	**370**	10
10061-02-6	t-1,3-Dichloropropene	ND	10

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	141	74 - 136
Toluene-D8	103	85 - 118
1,4-Bromofluorobenzene	98	78 - 111

Comments: The percent recovery for surrogate compound 1,2-dichloroethane-D4 did not meet the acceptable QC criteria.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0017	Lab Sample ID:	AB28173
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/23/12	Volume Purged:	5 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1000
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1000	
71-55-6	1,1,1-Trichloroethane	ND	1000	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1000	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1000	
79-00-5	1,1,2-Trichloroethane	ND	1000	
75-35-4	1,1-Dichloroethylene	ND	1000	
563-58-6	1,1-Dichloropropene	ND	1000	
75-34-3	1,1-dichloroethane	ND	1000	
87-61-6	1,2,3-Trichlorobenzene	ND	1000	
96-18-4	1,2,3-Trichloropropane	ND	1000	
120-82-1	1,2,4-Trichlorobenzene	ND	1000	
95-63-6	1,2,4-Trimethylbenzene	ND	1000	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1000	
106-93-4	1,2-Dibromoethane	ND	1000	
95-50-1	1,2-Dichlorobenzene	ND	1000	
107-06-2	1,2-Dichloroethane	ND	1000	
78-87-5	1,2-Dichloropropane	ND	1000	
108-67-8	1,3,5-Trimethylbenzene	ND	1000	
541-73-1	1,3-Dichlorobenzene	ND	1000	
142-28-9	1,3-Dichloropropane	ND	1000	
106-46-7	1,4-Dichlorobenzene	ND	1000	
594-20-7	2,2-Dichloropropane	ND	1000	
78-93-3	2-Butanone (MEK)	ND	1000	
95-49-8	2-Chlorotoluene	ND	1000	
591-78-6	2-Hexanone	ND	1000	
67-64-1	2-Propanone (acetone)	ND	1000	
106-43-4	4-Chlorotoluene	ND	1000	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1000	
107-13-1	Acrylonitrile	ND	1000	
71-43-2	Benzene	ND	1000	
108-86-1	Bromobenzene	ND	1000	
74-97-5	Bromochloromethane	ND	1000	
75-27-4	Bromodichloromethane	ND	1000	
75-25-2	Bromoform	ND	1000	
74-83-9	Bromomethane	ND	1000	
75-15-0	Carbon Disulfide	ND	1000	
56-23-5	Carbon tetrachloride	ND	1000	
108-90-7	Chlorobenzene	ND	1000	
75-00-3	Chloroethane	ND	1000	

67-66-3	Chloroform	ND	1000
74-87-3	Chloromethane	ND	1000
124-48-1	Dibromochloromethane	ND	1000
74-95-3	Dibromomethane	ND	1000
75-71-8	Dichlorodifluoromethane	ND	1000
60-29-7	Ethyl Ether	ND	1000
100-41-4	Ethylbenzene	ND	1000
87-68-3	Hexachlorobutadiene	ND	1000
98-82-8	Isopropylbenzene	ND	1000
108-38-3/106-42-:	M/P Xylene	ND	2000
1634-04-4	Methyl-t-Butyl Ether	ND	1000
75-09-2	Methylene Chloride	ND	1000
104-51-8	N-Butylbenzene	ND	1000
103-65-1	N-Propylbenzene	ND	1000
91-20-3	Naphthalene	ND	1000
95-47-6	Ortho Xylene	ND	1000
99-87-6	Para-Isopropyltoluene	ND	1000
135-98-8	Sec-Butylbenzene	ND	1000
100-42-5	Styrene	ND	1000
98-06-6	Tert-Butylbenzene	ND	1000
127-18-4	Tetrachloroethylene	**15000**	1000
109-99-9	Tetrahydrofuran	ND	1000
108-88-3	Toluene	ND	1000
156-60-5	Trans-1,2-Dichloroethylene	ND	1000
79-01-6	Trichloroethylene	ND	1000
75-69-4	Trichlorofluoromethane	ND	1000
108-05-4	Vinyl Acetate	ND	1000
75-01-4	Vinyl Chloride	ND	1000
10061-01-5	c-1,3-dichloropropene	ND	1000
156-59-2	cis-1,2-Dichloroethylene	ND	1000
10061-02-6	t-1,3-Dichloropropene	ND	1000

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	144	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	98	78 - 111

Comments: The percent recovery for surrogate compound 1,2-dichloroethane-D4 did not meet the acceptable QC criteria.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0019	Lab Sample ID:	AB28174
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/23/12	Volume Purged:	5 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	**1.5**	1.0	B
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-:	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	128	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	100	78 - 111

Comments: Acetone was observed in the laboratory blank associated with this sample and is qualified with a B.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

Laboratory Blank for $VOAMW

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	GW
Date of Extraction:	3/23/12	Volume Purged:	5.0 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	~6

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	**1.2**	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-3	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	126	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	99	78 - 111

Comments: Laboratory blank is associated with sample AB28174 (MS/MS and Duplicate Studies).

Acetone was reported in this laboratory blank at 1.2 ug/L. Observations of this compound in samples associated with this laboratory blank are qualified with a B.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0020	Lab Sample ID:	AB28175
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/23/12	Volume Purged:	5 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	10
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	10	
71-55-6	1,1,1-Trichloroethane	ND	10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	10	
79-00-5	1,1,2-Trichloroethane	ND	10	
75-35-4	1,1-Dichloroethylene	ND	10	
563-58-6	1,1-Dichloropropene	ND	10	
75-34-3	1,1-dichloroethane	ND	10	
87-61-6	1,2,3-Trichlorobenzene	ND	10	
96-18-4	1,2,3-Trichloropropane	ND	10	
120-82-1	1,2,4-Trichlorobenzene	ND	10	
95-63-6	1,2,4-Trimethylbenzene	ND	10	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	10	
106-93-4	1,2-Dibromoethane	ND	10	
95-50-1	1,2-Dichlorobenzene	ND	10	
107-06-2	1,2-Dichloroethane	ND	10	
78-87-5	1,2-Dichloropropane	ND	10	
108-67-8	1,3,5-Trimethylbenzene	ND	10	
541-73-1	1,3-Dichlorobenzene	ND	10	
142-28-9	1,3-Dichloropropane	ND	10	
106-46-7	1,4-Dichlorobenzene	ND	10	
594-20-7	2,2-Dichloropropane	ND	10	
78-93-3	2-Butanone (MEK)	ND	10	
95-49-8	2-Chlorotoluene	ND	10	
591-78-6	2-Hexanone	ND	10	
67-64-1	2-Propanone (acetone)	ND	10	
106-43-4	4-Chlorotoluene	ND	10	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	10	
107-13-1	Acrylonitrile	ND	10	
71-43-2	Benzene	ND	10	
108-86-1	Bromobenzene	ND	10	
74-97-5	Bromochloromethane	ND	10	
75-27-4	Bromodichloromethane	ND	10	
75-25-2	Bromoform	ND	10	
74-83-9	Bromomethane	ND	10	
75-15-0	Carbon Disulfide	ND	10	
56-23-5	Carbon tetrachloride	ND	10	
108-90-7	Chlorobenzene	ND	10	
75-00-3	Chloroethane	ND	10	

67-66-3	Chloroform	ND	10
74-87-3	Chloromethane	ND	10
124-48-1	Dibromochloromethane	ND	10
74-95-3	Dibromomethane	ND	10
75-71-8	Dichlorodifluoromethane	ND	10
60-29-7	Ethyl Ether	ND	10
100-41-4	Ethylbenzene	ND	10
87-68-3	Hexachlorobutadiene	ND	10
98-82-8	Isopropylbenzene	ND	10
108-38-3/106-42-3	M/P Xylene	ND	20
1634-04-4	Methyl-t-Butyl Ether	ND	10
75-09-2	Methylene Chloride	ND	10
104-51-8	N-Butylbenzene	ND	10
103-65-1	N-Propylbenzene	ND	10
91-20-3	Naphthalene	ND	10
95-47-6	Ortho Xylene	ND	10
99-87-6	Para-Isopropyltoluene	ND	10
135-98-8	Sec-Butylbenzene	ND	10
100-42-5	Styrene	ND	10
98-06-6	Tert-Butylbenzene	ND	10
127-18-4	Tetrachloroethylene	**420**	10
109-99-9	Tetrahydrofuran	ND	10
108-88-3	Toluene	ND	10
156-60-5	Trans-1,2-Dichloroethylene	ND	10
79-01-6	Trichloroethylene	**12**	10
75-69-4	Trichlorofluoromethane	ND	10
108-05-4	Vinyl Acetate	ND	10
75-01-4	Vinyl Chloride	ND	10
10061-01-5	c-1,3-dichloropropene	ND	10
156-59-2	cis-1,2-Dichloroethylene	**380**	10
10061-02-6	t-1,3-Dichloropropene	ND	10

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	144	74 - 136
Toluene-D8	104	85 - 118
1,4-Bromofluorobenzene	98	78 - 111

Comments: The percent recovery for surrogate compound 1,2-dichloroethane-D4 did not meet the acceptable QC criteria.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0024	Lab Sample ID:	AB28176
Date of Collection:	3/21/2012	Matrix	GW
Date of Extraction:	3/23/12	Volume Purged:	5 mL
Date of Analysis:	3/23/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	**1.2**	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0	
74-87-3	Chloromethane	ND	1.0	
124-48-1	Dibromochloromethane	ND	1.0	
74-95-3	Dibromomethane	ND	1.0	
75-71-8	Dichlorodifluoromethane	ND	1.0	
60-29-7	Ethyl Ether	ND	1.0	
100-41-4	Ethylbenzene	ND	1.0	
87-68-3	Hexachlorobutadiene	ND	1.0	
98-82-8	Isopropylbenzene	ND	1.0	
108-38-3/106-42-3	M/P Xylene	ND	2.0	
1634-04-4	Methyl-t-Butyl Ether	ND	1.0	
75-09-2	Methylene Chloride	ND	1.0	
104-51-8	N-Butylbenzene	ND	1.0	
103-65-1	N-Propylbenzene	ND	1.0	
91-20-3	Naphthalene	ND	1.0	
95-47-6	Ortho Xylene	ND	1.0	
99-87-6	Para-Isopropyltoluene	ND	1.0	
135-98-8	Sec-Butylbenzene	ND	1.0	
100-42-5	Styrene	ND	1.0	
98-06-6	Tert-Butylbenzene	ND	1.0	
127-18-4	Tetrachloroethylene	ND	1.0	
109-99-9	Tetrahydrofuran	**2.6**	1.0	J
108-88-3	Toluene	ND	1.0	
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0	
79-01-6	Trichloroethylene	ND	1.0	
75-69-4	Trichlorofluoromethane	ND	1.0	
108-05-4	Vinyl Acetate	ND	1.0	
75-01-4	Vinyl Chloride	ND	1.0	
10061-01-5	c-1,3-dichloropropene	ND	1.0	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	
10061-02-6	t-1,3-Dichloropropene	ND	1.0	

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	140	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	96	78 - 111

Comments: The percent recovery for surrogate compound 1,2-dichloroethane-D4 did not meet the acceptable QC criteria.

Tetrahydrofuran did not meet the acceptable QC criteria for continuous calibration and is qualified with J.

Tentatively Identified Compound	Conc. (ug/L)	Qualifier
Isopropyl Alcohol	230	J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

VOA MATRIX SPIKE (MS) / MATRIX SPIKE DUPLICATE (MSD) RECOVERY

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28174

PARAMETER	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC	QC LIMITS (% REC)
1,1,1,2-Tetrachloroethane	20	ND	21	105	67 - 129
1,1,1-Trichloroethane	20	ND	24	120	75 - 139
1,1,2,2-Tetrachloroethane	20	ND	22	110	50 - 142
1,1,2-Trichloro-1,2,2-Trifluoroetha	20	ND	17	85	55 - 135
1,1,2-Trichloroethane	20	ND	22	110	62 - 142
1,1-Dichloroethylene	20	ND	23	115	80 - 138
1,1-Dichloropropene	20	ND	23	115	73 - 131
1,1-dichloroethane	20	ND	26	130	61 - 152
1,2,3-Trichlorobenzene	20	ND	20	100	49 - 143
1,2,3-Trichloropropane	20	ND	22	110	53 - 135
1,2,4-Trichlorobenzene	20	ND	20	100	63 - 131
1,2,4-Trimethylbenzene	20	ND	22	110	79 - 142
1,2-Dibromo-3-Chloropropane	20	ND	23	115	28 - 122
1,2-Dibromoethane	20	ND	21	105	53 - 139
1,2-Dichlorobenzene	20	ND	21	105	74 - 129
1,2-Dichloroethane	20	ND	26	130	61 - 142
1,2-Dichloropropane	20	ND	22	110	71 - 126
1,3,5-Trimethylbenzene	20	ND	23	115	77 - 140
1,3-Dichlorobenzene	20	ND	21	105	78 - 127
1,3-Dichloropropane	20	ND	22	110	63 - 130
1,4-Dichlorobenzene	20	ND	21	105	72 - 131
2,2-Dichloropropane	20	ND	21	105	50 - 139
2-Butanone (MEK)	20	ND	15	75	29 - 163
2-Chlorotoluene	20	ND	22	110	74 - 134
2-Hexanone	20	ND	16	80	36 - 141
2-Propanone (acetone)	20	1.5	12	53	29 - 164
4-Chlorotoluene	20	ND	22	110	68 - 141
4-Methyl-2-Pentanone(MIBK)	20	ND	22	110	35 - 139
Acrylonitrile	20	ND	26	130	42 - 150
Benzene	20	ND	22	110	78 - 134
Bromobenzene	20	ND	21	105	76 - 126
Bromochloromethane	20	ND	23	115	62 - 140
Bromodichloromethane	20	ND	23	115	62 - 133
Bromoform	20	ND	18	90	31 - 133
Bromomethane	20	ND	20	100	58 - 148
Carbon Disulfide	20	ND	24	120	66 - 135
Carbon tetrachloride	20	ND	22	110	62 - 146
Chlorobenzene	20	ND	24	120	74 - 139
Chloroethane	20	ND	21	105	65 - 145
Chloroform	20	ND	26	130	60 - 144
Chloromethane	20	ND	23	115	58 - 134
Dibromochloromethane	20	ND	22	110	34 - 140
Dibromomethane	20	ND	22	110	67 - 125
Dichlorodifluoromethane	20	ND	19	95	30 - 132
Ethyl Ether	20	ND	29	145	58 - 145
Ethylbenzene	20	ND	22	110	73 - 143
Hexachlorobutadiene	20	ND	20	100	56 - 144
Isopropylbenzene	20	ND	22	110	73 - 139
M/P Xylene	40	ND	42	105	79 - 136

Methyl-t-Butyl Ether	20	ND	22	110	50 - 144
Methylene Chloride	20	ND	30	150	70 - 144
N-Butylbenzene	20	ND	24	120	68 - 143
N-Propylbenzene	20	ND	23	115	72 - 149
Naphthalene	20	ND	20	100	33 - 154
Ortho Xylene	20	ND	21	105	80 - 129
Para-Isopropyltoluene	20	ND	22	110	71 - 140
Sec-Butylbenzene	20	ND	22	110	75 - 148
Styrene	20	ND	21	105	61 - 148
Tert-Butylbenzene	20	ND	21	105	71 - 139
Tetrachloroethylene	20	ND	19	95	45 - 145
Tetrahydrofuran	20	ND	26	130	37 - 143
Toluene	20	ND	22	110	77 - 142
Trans-1,2-Dichloroethylene	20	ND	23	115	79 - 139
Trichloroethylene	20	ND	21	105	65 - 143
Trichlorofluoromethane	20	ND	23	115	58 - 161
Vinyl Acetate	20	ND	15	75	22 - 173
Vinyl Chloride	20	ND	24	120	68 - 139
c-1,3-dichloropropene	20	ND	22	110	51 - 144
cis-1,2-Dichloroethylene	20	ND	24	120	59 - 154
t-1,3-Dichloropropene	20	ND	21	105	47 - 145

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Sample ID: AB28174

PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION ug/L	MSD % REC	RPD %	QC LIMITS RPD
1,1,1,2-Tetrachloroethane	20.0	22	110	5	40
1,1,1-Trichloroethane	20.0	25	125	4	16
1,1,2,2-Tetrachloroethane	20.0	22	110	0	40
1,1,2-Trichloro-1,2,2-Trifluoroetha	20.0	18	90	6	40
1,1,2-Trichloroethane	20.0	23	115	4	40
1,1-Dichloroethylene	20.0	24	120	4	35
1,1-Dichloropropene	20.0	24	120	4	40
1,1-dichloroethane	20.0	26	130	0	40
1,2,3-Trichlorobenzene	20.0	20	100	0	40
1,2,3-Trichloropropane	20.0	23	115	4	40
1,2,4-Trichlorobenzene	20.0	21	105	5	40
1,2,4-Trimethylbenzene	20.0	23	115	4	40
1,2-Dibromo-3-Chloropropane	20.0	22	110	4	40
1,2-Dibromoethane	20.0	21	105	0	40
1,2-Dichlorobenzene	20.0	21	105	0	40
1,2-Dichloroethane	20.0	26	130	0	23
1,2-Dichloropropane	20.0	24	120	9	40
1,3,5-Trimethylbenzene	20.0	23	115	0	40
1,3-Dichlorobenzene	20.0	21	105	0	40
1,3-Dichloropropane	20.0	22	110	0	40
1,4-Dichlorobenzene	20.0	21	105	0	21
2,2-Dichloropropane	20.0	22	110	5	40
2-Butanone (MEK)	20.0	15	75	0	40
2-Chlorotoluene	20.0	22	110	0	40
2-Hexanone	20.0	16	80	0	40
2-Propanone (acetone)	20.0	13	58	9	40
4-Chlorotoluene	20.0	23	115	4	40
4-Methyl-2-Pentanone(MIBK)	20.0	23	115	4	40
Acrylonitrile	20.0	26	130	0	40
Benzene	20.0	23	115	4	14
Bromobenzene	20.0	22	110	5	40
Bromochloromethane	20.0	23	115	0	40
Bromodichloromethane	20.0	24	120	4	21
Bromoform	20.0	18	90	0	40
Bromomethane	20.0	21	105	5	40
Carbon Disulfide	20.0	25	125	4	40
Carbon tetrachloride	20.0	23	115	4	19
Chlorobenzene	20.0	24	120	0	40
Chloroethane	20.0	21	105	0	40
Chloroform	20.0	26	130	0	16
Chloromethane	20.0	24	120	4	40
Dibromochloromethane	20.0	22	110	0	36
Dibromomethane	20.0	23	115	4	40
Dichlorodifluoromethane	20.0	20	100	5	40
Ethyl Ether	20.0	29	145	0	40
Ethylbenzene	20.0	22	110	0	40
Hexachlorobutadiene	20.0	21	105	5	40
Isopropylbenzene	20.0	22	110	0	40
M/P Xylene	40.0	43	108	3	40
Methyl-t-Butyl Ether	20.0	22	110	0	40
Methylene Chloride	20.0	30	150	0	40
N-Butylbenzene	20.0	24	120	0	40
N-Propylbenzene	20.0	23	115	0	40
Naphthalene	20.0	21	105	5	40

Ortho Xylene	20.0	21	105	0	40
Para-Isopropyltoluene	20.0	23	115	4	40
Sec-Butylbenzene	20.0	23	115	4	40
Styrene	20.0	22	110	5	40
Tert-Butylbenzene	20.0	22	110	5	40
Tetrachloroethylene	20.0	20	100	5	40
Tetrahydrofuran	20.0	27	135	4	40
Toluene	20.0	23	115	4	40
Trans-1,2-Dichloroethylene	20.0	24	120	4	40
Trichloroethylene	20.0	22	110	5	22
Trichlorofluoromethane	20.0	25	125	8	40
Vinyl Acetate	20.0	15	75	0	40
Vinyl Chloride	20.0	25	125	4	19
c-1,3-dichloropropene	20.0	23	115	4	40
cis-1,2-Dichloroethylene	20.0	24	120	0	40
t-1,3-Dichloropropene	20.0	22	110	5	40

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28174

PARAMETER	SAMPLE RESULT ug/L	SAMPLE DUPLICATE RESULT ug/L	PRECISION RPD %	QC LIMITS
1,1,1,2-Tetrachloroethane	ND	ND	ND	30
1,1,1-Trichloroethane	ND	ND	ND	30
1,1,2,2-Tetrachloroethane	ND	ND	ND	30
1,1,2-Trichloro-1,2,2-Trifluoroeth:	ND	ND	ND	30
1,1,2-Trichloroethane	ND	ND	ND	30
1,1-Dichloroethylene	ND	ND	ND	30
1,1-Dichloropropene	ND	ND	ND	30
1,1-dichloroethane	ND	ND	ND	30
1,2,3-Trichlorobenzene	ND	ND	ND	30
1,2,3-Trichloropropane	ND	ND	ND	30
1,2,4-Trichlorobenzene	ND	ND	ND	30
1,2,4-Trimethylbenzene	ND	ND	ND	30
1,2-Dibromo-3-Chloropropane	ND	ND	ND	30
1,2-Dibromoethane	ND	ND	ND	30
1,2-Dichlorobenzene	ND	ND	ND	30
1,2-Dichloroethane	ND	ND	ND	30
1,2-Dichloropropane	ND	ND	ND	30
1,3,5-Trimethylbenzene	ND	ND	ND	30
1,3-Dichlorobenzene	ND	ND	ND	30
1,3-Dichloropropane	ND	ND	ND	30
1,4-Dichlorobenzene	ND	ND	ND	30
2,2-Dichloropropane	ND	ND	ND	30
2-Butanone (MEK)	ND	ND	ND	30
2-Chlorotoluene	ND	ND	ND	30
2-Hexanone	ND	ND	ND	30
2-Propanone (acetone)	1.5	1.1	30.8	30
4-Chlorotoluene	ND	ND	ND	30
4-Methyl-2-Pentanone(MIBK)	ND	ND	ND	30
Acrylonitrile	ND	ND	ND	30
Benzene	ND	ND	ND	30
Bromobenzene	ND	ND	ND	30
Bromochloromethane	ND	ND	ND	30
Bromodichloromethane	ND	ND	ND	30
Bromoform	ND	ND	ND	30
Bromomethane	ND	ND	ND	30
Carbon Disulfide	ND	ND	ND	30
Carbon tetrachloride	ND	ND	ND	30
Chlorobenzene	ND	ND	ND	30
Chloroethane	ND	ND	ND	30
Chloroform	ND	ND	ND	30
Chloromethane	ND	ND	ND	30
Dibromochloromethane	ND	ND	ND	30
Dibromomethane	ND	ND	ND	30
Dichlorodifluoromethane	ND	ND	ND	30
Ethyl Ether	ND	ND	ND	30
Ethylbenzene	ND	ND	ND	30
Hexachlorobutadiene	ND	ND	ND	30
Isopropylbenzene	ND	ND	ND	30
M/P Xylene	ND	ND	ND	30
Methyl-t-Butyl Ether	ND	ND	ND	30

Methylene Chloride	ND	ND	ND	30
N-Butylbenzene	ND	ND	ND	30
N-Propylbenzene	ND	ND	ND	30
Naphthalene	ND	ND	ND	30
Ortho Xylene	ND	ND	ND	30
Para-Isopropyltoluene	ND	ND	ND	30
Sec-Butylbenzene	ND	ND	ND	30
Styrene	ND	ND	ND	30
Tert-Butylbenzene	ND	ND	ND	30
Tetrachloroethylene	ND	ND	ND	30
Tetrahydrofuran	ND	ND	ND	30
Toluene	ND	ND	ND	30
Trans-1,2-Dichloroethylene	ND	ND	ND	30
Trichloroethylene	ND	ND	ND	30
Trichlorofluoromethane	ND	ND	ND	30
Vinyl Acetate	ND	ND	ND	30
Vinyl Chloride	ND	ND	ND	30
c-1,3-dichloropropene	ND	ND	ND	30
cis-1,2-Dichloroethylene	ND	ND	ND	30
t-1,3-Dichloropropene	ND	ND	ND	30

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Fortified Blank (LFB) Results

Henry's Dry Cleaners - Laconia, NH

PARAMETER	LFB AMOUNT SPIKED ug/mL	LFB RESULT ug/mL	LFB RECOVERY %	QC LIMITS %
1,1,1,2-Tetrachloroethane	20	20	100	79 - 136
1,1,1-Trichloroethane	20	21	105	75 - 146
1,1,2,2-Tetrachloroethane	20	20	100	62 - 141
1,1,2-Trichloro-1,2,2-Trifluoroeth	20	19	95	56 - 130
1,1,2-Trichloroethane	20	21	105	75 - 138
1,1-Dichloroethylene	20	20	100	75 - 136
1,1-Dichloropropene	20	21	105	77 - 137
1,1-dichloroethane	20	22	110	76 - 142
1,2,3-Trichlorobenzene	20	18	90	64 - 143
1,2,3-Trichloropropane	20	20	100	66 - 133
1,2,4-Trichlorobenzene	20	18	90	80 - 131
1,2,4-Trimethylbenzene	20	20	100	74 - 155
1,2-Dibromo-3-Chloropropane	20	20	100	37 - 139
1,2-Dibromoethane	20	19	95	72 - 135
1,2-Dichlorobenzene	20	19	95	85 - 128
1,2-Dichloroethane	20	23	115	74 - 138
1,2-Dichloropropane	20	21	105	83 - 124
1,3,5-Trimethylbenzene	20	21	105	80 - 145
1,3-Dichlorobenzene	20	19	95	84 - 130
1,3-Dichloropropane	20	20	100	77 - 129
1,4-Dichlorobenzene	20	19	95	82 - 128
2,2-Dichloropropane	20	19	95	32 - 171
2-Butanone (MEK)	20	21	105	38 - 179
2-Chlorotoluene	20	20	100	78 - 134
2-Hexanone	20	21	105	45 - 158
2-Propanone (acetone)	20	22	110	14 - 209
4-Chlorotoluene	20	21	105	75 - 144
4-Methyl-2-Pentanone(MIBK)	20	21	105	40 - 144
Acrylonitrile	20	21	105	52 - 154
Benzene	20	20	100	83 - 130
Bromobenzene	20	19	95	85 - 126
Bromochloromethane	20	20	100	69 - 137
Bromodichloromethane	20	21	105	70 - 143
Bromoform	20	17	85	51 - 136
Bromomethane	20	23	115	65 - 140
Carbon Disulfide	20	21	105	68 - 140
Carbon tetrachloride	20	21	105	70 - 144
Chlorobenzene	20	22	110	84 - 131
Chloroethane	20	24	120	70 - 134
Chloroform	20	22	110	76 - 141
Chloromethane	20	26	130	63 - 123
Dibromochloromethane	20	20	100	39 - 154
Dibromomethane	20	20	100	79 - 124
Dichlorodifluoromethane	20	22	110	37 - 117
Ethyl Ether	20	23	115	67 - 140
Ethylbenzene	20	20	100	81 - 133
Hexachlorobutadiene	20	18	90	68 - 146
Isopropylbenzene	20	20	100	78 - 137
M/P Xylene	40	39	98	68 - 155
Methyl-t-Butyl Ether	20	19	95	63 - 144
Methylene Chloride	20	25	125	75 - 140
N-Butylbenzene	20	21	105	69 - 147
N-Propylbenzene	20	21	105	76 - 138

Naphthalene	20	19	95	53 - 155
Ortho Xylene	20	19	95	85 - 135
Para-Isopropyltoluene	20	20	100	77 - 141
Sec-Butylbenzene	20	20	100	80 - 141
Styrene	20	20	100	82 - 139
Tert-Butylbenzene	20	20	100	75 - 144
Tetrachloroethylene	20	18	90	32 - 173
Tetrahydrofuran	20	23	115	47 - 149
Toluene	20	20	100	85 - 134
Trans-1,2-Dichloroethylene	20	21	105	80 - 138
Trichloroethylene	20	20	100	76 - 135
Trichlorofluoromethane	20	26	130	60 - 149
Vinyl Acetate	20	18	90	38 - 187
Vinyl Chloride	20	27	135	66 - 133
c-1,3-dichloropropene	20	20	100	68 - 149
cis-1,2-Dichloroethylene	20	21	105	76 - 143
t-1,3-Dichloropropene	20	20	100	62 - 160

Comments: The percent recoveries for methylene chloride did not meet the acceptable QC criteria in the MS/MS Study.

The percent recoveries for chloromethane and vinyl chloride did not meet the acceptable QC criteria in the LFB/LFB Study.

LABORATORY FORTIFIED DUPLICATE (LFB Dup) RECOVERY

COMPOUND	LFB Dup CONCENTRATION ug/L	LFB Dup RECOVERY %	RPD %	QC LIMITS RPD
1,1,1,2-Tetrachloroethane	21	105	5	50
1,1,1-Trichloroethane	23	115	9	50
1,1,2,2-Tetrachloroethane	21	105	5	50
1,1,2-Trichloro-1,2,2-Trifluoroetha	21	105	10	50
1,1,2-Trichloroethane	22	110	5	50
1,1-Dichloroethylene	22	110	10	52
1,1-Dichloropropene	23	115	9	50
1,1-dichloroethane	24	120	9	50
1,2,3-Trichlorobenzene	20	100	11	50
1,2,3-Trichloropropane	21	105	5	50
1,2,4-Trichlorobenzene	20	100	11	50
1,2,4-Trimethylbenzene	22	110	10	50
1,2-Dibromo-3-Chloropropane	21	105	5	50
1,2-Dibromoethane	20	100	5	50
1,2-Dichlorobenzene	20	100	5	50
1,2-Dichloroethane	25	125	8	50
1,2-Dichloropropane	22	110	5	50
1,3,5-Trimethylbenzene	22	110	5	50
1,3-Dichlorobenzene	20	100	5	50
1,3-Dichloropropane	22	110	10	50
1,4-Dichlorobenzene	20	100	5	50
2,2-Dichloropropane	21	105	10	50
2-Butanone (MEK)	23	115	9	50
2-Chlorotoluene	21	105	5	50
2-Hexanone	24	120	13	50
2-Propanone (acetone)	24	120	9	50
4-Chlorotoluene	22	110	5	50
4-Methyl-2-Pentanone(MIBK)	23	115	9	50
Acrylonitrile	24	120	13	50
Benzene	22	110	10	50
Bromobenzene	21	105	10	50
Bromochloromethane	22	110	10	50
Bromodichloromethane	23	115	9	50
Bromoform	18	90	6	50
Bromomethane	22	110	4	50
Carbon Disulfide	23	115	9	50
Carbon tetrachloride	23	115	9	50
Chlorobenzene	23	115	4	34
Chloroethane	24	120	0	50
Chloroform	24	120	9	50
Chloromethane	26	130	0	50
Dibromochloromethane	22	110	10	50
Dibromomethane	21	105	5	50
Dichlorodifluoromethane	23	115	4	50
Ethyl Ether	26	130	12	50
Ethylbenzene	22	110	10	50
Hexachlorobutadiene	20	100	11	50
Isopropylbenzene	21	105	5	50
M/P Xylene	42	105	7	50
Methyl-t-Butyl Ether	21	105	10	50
Methylene Chloride	27	135	8	50
N-Butylbenzene	23	115	9	50
N-Propylbenzene	22	110	5	50
Naphthalene	20	100	5	50
Ortho Xylene	21	105	10	50
Para-Isopropyltoluene	21	105	5	50

Sec-Butylbenzene	22	110	10	50
Styrene	21	105	5	50
Tert-Butylbenzene	21	105	5	50
Tetrachloroethylene	19	95	5	50
Tetrahydrofuran	24	120	4	50
Toluene	22	110	10	50
Trans-1,2-Dichloroethylene	22	110	5	50
Trichloroethylene	22	110	10	27
Trichlorofluoromethane	27	135	4	50
Vinyl Acetate	18	90	0	50
Vinyl Chloride	27	135	0	50
c-1,3-dichloropropene	22	110	10	50
cis-1,2-Dichloroethylene	22	110	5	50
t-1,3-Dichloropropene	21	105	5	50

Samples in Batch: AB28170, AB28171, AB28172, AB28173, AB28174, AB28175, AB28176

USEPA Region 1
START III

PN: 12030017

CHAIN OF CUSTODY RECORD
Henry's Dry Cleaners
Contact Name: Janis Tsang
Contact Phone: 617-413-5053

No: 1-032212-201823-0003
Site #: R01-120316TJ
Lab: NERL/OEME
Lab Contact: Doris Guzman

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0012	GW-07 ✓	NW-3B	SVOCs	Ground Water	2012-03-21	11:55	2	1 L Amber		
	R01-120314JT-0012 ✓	GW-07	NW-3B	VOCs	Ground Water	2012-03-21	11:55	4	40 mL Vial	HCl	
	R01-120314JT-0013	GW-08 ✓	NW-3C	SVOCs	Ground Water	2012-03-21	17:20	2	1 L Amber		
	R01-120314JT-0013 ✓	GW-08	NW-3C	VOCs	Ground Water	2012-03-21	17:20	4	40 mL Vial	HCl	
	R01-120314JT-0016	GW-11 ✓	MW-102	SVOCs	Ground Water	2012-03-21	17:20	2	1 L Amber		
	R01-120314JT-0016 ✓	GW-11	MW-102	VOCs	Ground Water	2012-03-21	17:20	4	40 mL Vial	HCl	
	R01-120314JT-0017	GW-12 ✓	MW-101D	SVOCs	Ground Water	2012-03-21	16:45	2	1 L Amber		
	R01-120314JT-0017 ✓	GW-12	MW-101D	VOCs	Ground Water	2012-03-21	16:45	4	40 mL Vial	HCl	
	R01-120314JT-0019	GW-14 ✓	MW-103	SVOCs	Ground Water	2012-03-21	12:50	2	1 L Amber		
	R01-120314JT-0019 ✓	GW-14	MW-103	VOCs	Ground Water	2012-03-21	12:50	4	40 mL Vial	HCl	
	R01-120314JT-0020	GW-15 ✓	MW-102	SVOCs	Ground Water	2012-03-21	17:20	2	1 L Amber		
	R01-120314JT-0020 ✓	GW-15	MW-102	VOCs	Ground Water	2012-03-21	17:20	4	40 mL Vial	HCl	
	R01-120314JT-0024	RB-02 ✓		SVOCs	Equipment Blank	2012-03-21	18:00	2	1 L Amber		
	R01-120314JT-0024 ✓	RB-02		VOCs	Equipment Blank	2012-03-21	18:00	4	40 mL Vial	HCl	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
ALL	[signature]	3/22/12	Paul [signature]	3/22/12	0907	ALL	Paul [signature]	3/22/12	[signature]	3/22/12	1134

Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

April 04, 2012

Janis Tsang - mail Code OSRR02-2
US EPA New England R1

Project Number: 12030016
Project: Henry's Dry Cleaners - Laconia, NH
Analysis: VOAs in Water
Analyst: Joseph Montanaro

04/04/12

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-VOAGCMS9.

Samples were analyzed by GC/MS. Samples were introduced to the GC via a Tekmar pre-concentrator and an Archon autosampler. The analysis SOP is based on US EPA Method 8260B, method 5030B, rev 2.0 SW-846, Rev 2.0,1996. Method 624, 40CFR Part 136 Appendix A, July 1, 1992, and USEPA CLP SOW for Organic Analysis OLM04.2, 1999.

Date Samples Received by the Laboratory: 03/21/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340 .

Sincerely,

4/5/12

Daniel N. Boudreau
Chemistry Team Leader

Qualifiers: RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
NC = Not calculated since analyte concentration is ND.
J = Estimated value
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 5 times the concentration in the blank.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0006	Lab Sample ID:	AB28160
Date of Collection:	3/20/2012	Matrix	GW
Date of Extraction:	3/21/12	Volume Purged:	5 mL
Date of Analysis:	3/21/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-3	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	118	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	99	78 - 111

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

Laboratory Blank for $VOAMW

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	GW
Date of Extraction:	3/21/12	Volume Purged:	5.0 mL
Date of Analysis:	3/21/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	~6

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-3	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	111	74 - 136
Toluene-D8	100	85 - 118
1,4-Bromofluorobenzene	101	78 - 111

Comments: Laboratory blank is associated with samples AB28160 (Duplicate Study) and AB28169.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0007	Lab Sample ID:	AB28161
Date of Collection:	3/20/2012	Matrix	GW
Date of Extraction:	3/21/12	Volume Purged:	5 mL
Date of Analysis:	3/21/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	20
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	20	
71-55-6	1,1,1-Trichloroethane	ND	20	
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	20	
79-00-5	1,1,2-Trichloroethane	ND	20	
75-35-4	1,1-Dichloroethylene	ND	20	
563-58-6	1,1-Dichloropropene	ND	20	
75-34-3	1,1-dichloroethane	ND	20	
87-61-6	1,2,3-Trichlorobenzene	ND	20	
96-18-4	1,2,3-Trichloropropane	ND	20	
120-82-1	1,2,4-Trichlorobenzene	ND	20	
95-63-6	1,2,4-Trimethylbenzene	ND	20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	20	
106-93-4	1,2-Dibromoethane	ND	20	
95-50-1	1,2-Dichlorobenzene	ND	20	
107-06-2	1,2-Dichloroethane	ND	20	
78-87-5	1,2-Dichloropropane	ND	20	
108-67-8	1,3,5-Trimethylbenzene	ND	20	
541-73-1	1,3-Dichlorobenzene	ND	20	
142-28-9	1,3-Dichloropropane	ND	20	
106-46-7	1,4-Dichlorobenzene	ND	20	
594-20-7	2,2-Dichloropropane	ND	20	
78-93-3	2-Butanone (MEK)	ND	20	
95-49-8	2-Chlorotoluene	ND	20	
591-78-6	2-Hexanone	ND	20	
67-64-1	2-Propanone (acetone)	ND	20	
106-43-4	4-Chlorotoluene	ND	20	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	20	
107-13-1	Acrylonitrile	ND	20	
71-43-2	Benzene	ND	20	
108-86-1	Bromobenzene	ND	20	
74-97-5	Bromochloromethane	ND	20	
75-27-4	Bromodichloromethane	ND	20	
75-25-2	Bromoform	ND	20	
74-83-9	Bromomethane	ND	20	
75-15-0	Carbon Disulfide	ND	20	
56-23-5	Carbon tetrachloride	ND	20	
108-90-7	Chlorobenzene	ND	20	
75-00-3	Chloroethane	ND	20	

67-66-3	Chloroform	ND	20
74-87-3	Chloromethane	ND	20
124-48-1	Dibromochloromethane	ND	20
74-95-3	Dibromomethane	ND	20
75-71-8	Dichlorodifluoromethane	ND	20
60-29-7	Ethyl Ether	ND	20
100-41-4	Ethylbenzene	ND	20
87-68-3	Hexachlorobutadiene	ND	20
98-82-8	Isopropylbenzene	ND	20
108-38-3/106-42-:	M/P Xylene	ND	40
1634-04-4	Methyl-t-Butyl Ether	ND	20
75-09-2	Methylene Chloride	ND	20
104-51-8	N-Butylbenzene	ND	20
103-65-1	N-Propylbenzene	ND	20
91-20-3	Naphthalene	ND	20
95-47-6	Ortho Xylene	ND	20
99-87-6	Para-Isopropyltoluene	ND	20
135-98-8	Sec-Butylbenzene	ND	20
100-42-5	Styrene	ND	20
98-06-6	Tert-Butylbenzene	ND	20
127-18-4	Tetrachloroethylene	**150**	20
109-99-9	Tetrahydrofuran	ND	20
108-88-3	Toluene	ND	20
156-60-5	Trans-1,2-Dichloroethylene	ND	20
79-01-6	Trichloroethylene	**140**	20
75-69-4	Trichlorofluoromethane	ND	20
108-05-4	Vinyl Acetate	ND	20
75-01-4	Vinyl Chloride	**63**	20
10061-01-5	c-1,3-dichloropropene	ND	20
156-59-2	cis-1,2-Dichloroethylene	**110**	20
10061-02-6	t-1,3-Dichloropropene	ND	20

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	123	74 - 136
Toluene-D8	101	85 - 118
1,4-Bromofluorobenzene	99	78 - 111

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

Laboratory Blank for $VOAMW

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	GW
Date of Extraction:	3/21/12	Volume Purged:	5.0 mL
Date of Analysis:	3/21/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	~6

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	**1.1**	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-:	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	123	74 - 136
Toluene-D8	101	85 - 118
1,4-Bromofluorobenzene	100	78 - 111

Comments: Laboratory blank is associated with samples AB28160 (MS/MS Study) - AB28167.

Acetone was reported in this laboratory blank at 1.1 ug/L. Observations of this compound is samples associated with this laboratory blank are qualified with a B.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0008	Lab Sample ID:	AB28162
Date of Collection:	3/20/2012	Matrix	GW
Date of Extraction:	3/21/12	Volume Purged:	5 mL
Date of Analysis:	3/21/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	10
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	10	
71-55-6	1,1,1-Trichloroethane	ND	10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	10	
79-00-5	1,1,2-Trichloroethane	ND	10	
75-35-4	1,1-Dichloroethylene	ND	10	
563-58-6	1,1-Dichloropropene	ND	10	
75-34-3	1,1-dichloroethane	ND	10	
87-61-6	1,2,3-Trichlorobenzene	ND	10	
96-18-4	1,2,3-Trichloropropane	ND	10	
120-82-1	1,2,4-Trichlorobenzene	ND	10	
95-63-6	1,2,4-Trimethylbenzene	ND	10	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	10	
106-93-4	1,2-Dibromoethane	ND	10	
95-50-1	1,2-Dichlorobenzene	ND	10	
107-06-2	1,2-Dichloroethane	ND	10	
78-87-5	1,2-Dichloropropane	ND	10	
108-67-8	1,3,5-Trimethylbenzene	ND	10	
541-73-1	1,3-Dichlorobenzene	ND	10	
142-28-9	1,3-Dichloropropane	ND	10	
106-46-7	1,4-Dichlorobenzene	ND	10	
594-20-7	2,2-Dichloropropane	ND	10	
78-93-3	2-Butanone (MEK)	ND	10	
95-49-8	2-Chlorotoluene	ND	10	
591-78-6	2-Hexanone	ND	10	
67-64-1	2-Propanone (acetone)	ND	10	
106-43-4	4-Chlorotoluene	ND	10	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	10	
107-13-1	Acrylonitrile	ND	10	
71-43-2	Benzene	ND	10	
108-86-1	Bromobenzene	ND	10	
74-97-5	Bromochloromethane	ND	10	
75-27-4	Bromodichloromethane	ND	10	
75-25-2	Bromoform	ND	10	
74-83-9	Bromomethane	ND	10	
75-15-0	Carbon Disulfide	ND	10	
56-23-5	Carbon tetrachloride	ND	10	
108-90-7	Chlorobenzene	ND	10	
75-00-3	Chloroethane	ND	10	

67-66-3	Chloroform	ND	10
74-87-3	Chloromethane	ND	10
124-48-1	Dibromochloromethane	ND	10
74-95-3	Dibromomethane	ND	10
75-71-8	Dichlorodifluoromethane	ND	10
60-29-7	Ethyl Ether	ND	10
100-41-4	Ethylbenzene	ND	10
87-68-3	Hexachlorobutadiene	ND	10
98-82-8	Isopropylbenzene	ND	10
108-38-3/106-42-:	M/P Xylene	ND	20
1634-04-4	Methyl-t-Butyl Ether	ND	10
75-09-2	Methylene Chloride	ND	10
104-51-8	N-Butylbenzene	ND	10
103-65-1	N-Propylbenzene	ND	10
91-20-3	Naphthalene	ND	10
95-47-6	Ortho Xylene	ND	10
99-87-6	Para-Isopropyltoluene	ND	10
135-98-8	Sec-Butylbenzene	ND	10
100-42-5	Styrene	ND	10
98-06-6	Tert-Butylbenzene	ND	10
127-18-4	Tetrachloroethylene	**70**	10
109-99-9	Tetrahydrofuran	ND	10
108-88-3	Toluene	ND	10
156-60-5	Trans-1,2-Dichloroethylene	ND	10
79-01-6	Trichloroethylene	**120**	10
75-69-4	Trichlorofluoromethane	ND	10
108-05-4	Vinyl Acetate	ND	10
75-01-4	Vinyl Chloride	**41**	10
10061-01-5	c-1,3-dichloropropene	ND	10
156-59-2	cis-1,2-Dichloroethylene	**220**	10
10061-02-6	t-1,3-Dichloropropene	ND	10

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	126	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	99	78 - 111

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0009	Lab Sample ID:	AB28163
Date of Collection:	3/20/2012	Matrix	GW
Date of Extraction:	3/21/12	Volume Purged:	5 mL
Date of Analysis:	3/21/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-3	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	**2.3**	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	**3.2**	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	129	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	99	78 - 111

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0010	Lab Sample ID:	AB28164
Date of Collection:	3/20/2012	Matrix	GW
Date of Extraction:	3/22/12	Volume Purged:	5 mL
Date of Analysis:	3/22/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	2
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.0	
71-55-6	1,1,1-Trichloroethane	ND	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	2.0	
79-00-5	1,1,2-Trichloroethane	ND	2.0	
75-35-4	1,1-Dichloroethylene	ND	2.0	
563-58-6	1,1-Dichloropropene	ND	2.0	
75-34-3	1,1-dichloroethane	ND	2.0	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	
96-18-4	1,2,3-Trichloropropane	ND	2.0	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	2.0	
106-93-4	1,2-Dibromoethane	ND	2.0	
95-50-1	1,2-Dichlorobenzene	ND	2.0	
107-06-2	1,2-Dichloroethane	ND	2.0	
78-87-5	1,2-Dichloropropane	ND	2.0	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	
541-73-1	1,3-Dichlorobenzene	ND	2.0	
142-28-9	1,3-Dichloropropane	ND	2.0	
106-46-7	1,4-Dichlorobenzene	ND	2.0	
594-20-7	2,2-Dichloropropane	ND	2.0	
78-93-3	2-Butanone (MEK)	ND	2.0	
95-49-8	2-Chlorotoluene	ND	2.0	
591-78-6	2-Hexanone	ND	2.0	
67-64-1	2-Propanone (acetone)	ND	2.0	
106-43-4	4-Chlorotoluene	ND	2.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	2.0	
107-13-1	Acrylonitrile	ND	2.0	
71-43-2	Benzene	ND	2.0	
108-86-1	Bromobenzene	ND	2.0	
74-97-5	Bromochloromethane	ND	2.0	
75-27-4	Bromodichloromethane	ND	2.0	
75-25-2	Bromoform	ND	2.0	
74-83-9	Bromomethane	ND	2.0	
75-15-0	Carbon Disulfide	ND	2.0	
56-23-5	Carbon tetrachloride	ND	2.0	
108-90-7	Chlorobenzene	ND	2.0	
75-00-3	Chloroethane	ND	2.0	

67-66-3	Chloroform	ND	2.0
74-87-3	Chloromethane	ND	2.0
124-48-1	Dibromochloromethane	ND	2.0
74-95-3	Dibromomethane	ND	2.0
75-71-8	Dichlorodifluoromethane	ND	2.0
60-29-7	Ethyl Ether	ND	2.0
100-41-4	Ethylbenzene	ND	2.0
87-68-3	Hexachlorobutadiene	ND	2.0
98-82-8	Isopropylbenzene	ND	2.0
108-38-3/106-42-3	M/P Xylene	ND	4.0
1634-04-4	Methyl-t-Butyl Ether	ND	2.0
75-09-2	Methylene Chloride	ND	2.0
104-51-8	N-Butylbenzene	ND	2.0
103-65-1	N-Propylbenzene	ND	2.0
91-20-3	Naphthalene	ND	2.0
95-47-6	Ortho Xylene	ND	2.0
99-87-6	Para-Isopropyltoluene	ND	2.0
135-98-8	Sec-Butylbenzene	ND	2.0
100-42-5	Styrene	ND	2.0
98-06-6	Tert-Butylbenzene	ND	2.0
127-18-4	Tetrachloroethylene	ND	2.0
109-99-9	Tetrahydrofuran	ND	2.0
108-88-3	Toluene	ND	2.0
156-60-5	Trans-1,2-Dichloroethylene	**3.7**	2.0
79-01-6	Trichloroethylene	**9.2**	2.0
75-69-4	Trichlorofluoromethane	ND	2.0
108-05-4	Vinyl Acetate	ND	2.0
75-01-4	Vinyl Chloride	**78**	2.0
10061-01-5	c-1,3-dichloropropene	ND	2.0
156-59-2	cis-1,2-Dichloroethylene	**260**	20
10061-02-6	t-1,3-Dichloropropene	ND	2.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	134	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	100	78 - 111

Comments: Cis-1,2-dichloroethylene was reported from a twenty-fold dilution.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0011	Lab Sample ID:	AB28165
Date of Collection:	3/20/2012	Matrix	GW
Date of Extraction:	3/21/12	Volume Purged:	5 mL
Date of Analysis:	3/21/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-:	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	129	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	98	78 - 111

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0014	Lab Sample ID:	AB28166
Date of Collection:	3/20/2012	Matrix	GW
Date of Extraction:	3/21/12	Volume Purged:	5 mL
Date of Analysis:	3/21/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-3	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	130	74 - 136
Toluene-D8	102	85 - 118
1,4-Bromofluorobenzene	100	78 - 111

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0021	Lab Sample ID:	AB28167
Date of Collection:	3/20/2012	Matrix	Aqueous PE
Date of Extraction:	3/21/12	Volume Purged:	5 mL
Date of Analysis:	3/21/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	**22**	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	**25**	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	**26**	1.0	
79-00-5	1,1,2-Trichloroethane	**30**	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	**50**	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	**53**	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	**30**	1.0	
106-93-4	1,2-Dibromoethane	**42**	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	**51**	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	**31**	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	**88**	10	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	**2.5**	1.0	
74-83-9	Bromomethane	**14**	1.0	
75-15-0	Carbon Disulfide	**34**	1.0	
56-23-5	Carbon tetrachloride	**55**	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	**50**	1.0
74-87-3	Chloromethane	**49**	1.0
124-48-1	Dibromochloromethane	**54**	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	**14**	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-3	M/P Xylene	**35**	2.0
1634-04-4	Methyl-t-Butyl Ether	**97**	10
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	**39**	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	**54**	1.0
156-60-5	Trans-1,2-Dichloroethylene	**57**	1.0
79-01-6	Trichloroethylene	**1.0**	1.0
75-69-4	Trichlorofluoromethane	**39**	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	**35**	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	130	74 - 136
Toluene-D8	104	85 - 118
1,4-Bromofluorobenzene	100	78 - 111

Comments: The concentrations for MTBE and MIBK were reported from a ten-fold dilution.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Henry's Dry Cleaners - Laconia, NH

VOAs in Water

Client Sample ID:	R01-120314JT-0023	Lab Sample ID:	AB28169
Date of Collection:	3/20/2012	Matrix	GW
Date of Extraction:	3/21/12	Volume Purged:	5 mL
Date of Analysis:	3/21/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	<2

CAS Number	Compound	Concentration ug/L	RL ug/L	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	**6.4**	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-3	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	**1.6**	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	**Recoveries (%)**	**QC Ranges**
1,2-Dichloroethane-D4	110	74 - 136
Toluene-D8	100	85 - 118
1,4-Bromofluorobenzene	99	78 - 111

Comments:	Tentatively Identified Compound	Conc. (ug/L)	Qualifier
	Isopropyl Alcohol	67	J

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

VOA MATRIX SPIKE (MS) / MATRIX SPIKE DUPLICATE (MSD) RECOVERY

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28160

PARAMETER	SPIKE ADDED ug/L	SAMPLE CONCENTRATION ug/L	MS CONCENTRATION ug/L	MS % REC	QC LIMITS (% REC)
1,1,1,2-Tetrachloroethane	20	ND	21	105	67 - 129
1,1,1-Trichloroethane	20	ND	24	120	75 - 139
1,1,2,2-Tetrachloroethane	20	ND	22	110	50 - 142
1,1,2-Trichloro-1,2,2-Trifluoroetha	20	ND	23	115	55 - 135
1,1,2-Trichloroethane	20	ND	22	110	62 - 142
1,1-Dichloroethylene	20	ND	23	115	80 - 138
1,1-Dichloropropene	20	ND	23	115	73 - 131
1,1-dichloroethane	20	ND	25	125	61 - 152
1,2,3-Trichlorobenzene	20	ND	21	105	49 - 143
1,2,3-Trichloropropane	20	ND	22	110	53 - 135
1,2,4-Trichlorobenzene	20	ND	20	100	63 - 131
1,2,4-Trimethylbenzene	20	ND	22	110	79 - 142
1,2-Dibromo-3-Chloropropane	20	ND	23	115	28 - 122
1,2-Dibromoethane	20	ND	21	105	53 - 139
1,2-Dichlorobenzene	20	ND	21	105	74 - 129
1,2-Dichloroethane	20	ND	24	120	61 - 142
1,2-Dichloropropane	20	ND	22	110	71 - 126
1,3,5-Trimethylbenzene	20	ND	22	110	77 - 140
1,3-Dichlorobenzene	20	ND	20	100	78 - 127
1,3-Dichloropropane	20	ND	22	110	63 - 130
1,4-Dichlorobenzene	20	ND	21	105	72 - 131
2,2-Dichloropropane	20	ND	20	100	50 - 139
2-Butanone (MEK)	20	ND	14	70	29 - 163
2-Chlorotoluene	20	ND	21	105	74 - 134
2-Hexanone	20	ND	15	75	36 - 141
2-Propanone (acetone)	20	ND	12	60	29 - 164
4-Chlorotoluene	20	ND	22	110	68 - 141
4-Methyl-2-Pentanone(MIBK)	20	ND	22	110	35 - 139
Acrylonitrile	20	ND	24	120	42 - 150
Benzene	20	ND	22	110	78 - 134
Bromobenzene	20	ND	21	105	76 - 126
Bromochloromethane	20	ND	22	110	62 - 140
Bromodichloromethane	20	ND	22	110	62 - 133
Bromoform	20	ND	18	90	31 - 133
Bromomethane	20	ND	24	120	58 - 148
Carbon Disulfide	20	ND	23	115	66 - 135
Carbon tetrachloride	20	ND	22	110	62 - 146
Chlorobenzene	20	ND	23	115	74 - 139
Chloroethane	20	ND	25	125	65 - 145
Chloroform	20	ND	24	120	60 - 144
Chloromethane	20	ND	26	130	58 - 134
Dibromochloromethane	20	ND	22	110	34 - 140
Dibromomethane	20	ND	22	110	67 - 125
Dichlorodifluoromethane	20	ND	22	110	30 - 132
Ethyl Ether	20	ND	25	125	58 - 145
Ethylbenzene	20	ND	22	110	73 - 143
Hexachlorobutadiene	20	ND	20	100	56 - 144
Isopropylbenzene	20	ND	21	105	73 - 139
M/P Xylene	40	ND	42	105	79 - 136

Methyl-t-Butyl Ether	20	ND	22	110	50 - 144
Methylene Chloride	20	ND	27	135	70 - 144
N-Butylbenzene	20	ND	22	110	68 - 143
N-Propylbenzene	20	ND	22	110	72 - 149
Naphthalene	20	ND	21	105	33 - 154
Ortho Xylene	20	ND	21	105	80 - 129
Para-Isopropyltoluene	20	ND	22	110	71 - 140
Sec-Butylbenzene	20	ND	22	110	75 - 148
Styrene	20	ND	21	105	61 - 148
Tert-Butylbenzene	20	ND	21	105	71 - 139
Tetrachloroethylene	20	ND	19	95	45 - 145
Tetrahydrofuran	20	ND	25	125	37 - 143
Toluene	20	ND	22	110	77 - 142
Trans-1,2-Dichloroethylene	20	ND	23	115	79 - 139
Trichloroethylene	20	ND	22	110	65 - 143
Trichlorofluoromethane	20	ND	27	135	58 - 161
Vinyl Acetate	20	ND	23	115	22 - 173
Vinyl Chloride	20	ND	28	140	68 - 139
c-1,3-dichloropropene	20	ND	21	105	51 - 144
cis-1,2-Dichloroethylene	20	ND	23	115	59 - 154
t-1,3-Dichloropropene	20	ND	21	105	47 - 145

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Sample ID: AB28160

PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION ug/L	MSD % REC	RPD %	QC LIMITS RPD
1,1,1,2-Tetrachloroethane	20.0	21	105	0	40
1,1,1-Trichloroethane	20.0	23	115	4	16
1,1,2,2-Tetrachloroethane	20.0	21	105	5	40
1,1,2-Trichloro-1,2,2-Trifluoroetha	20.0	23	115	0	40
1,1,2-Trichloroethane	20.0	22	110	0	40
1,1-Dichloroethylene	20.0	23	115	0	35
1,1-Dichloropropene	20.0	22	110	4	40
1,1-dichloroethane	20.0	24	120	4	40
1,2,3-Trichlorobenzene	20.0	21	105	0	40
1,2,3-Trichloropropane	20.0	21	105	5	40
1,2,4-Trichlorobenzene	20.0	20	100	0	40
1,2,4-Trimethylbenzene	20.0	21	105	5	40
1,2-Dibromo-3-Chloropropane	20.0	21	105	9	40
1,2-Dibromoethane	20.0	21	105	0	40
1,2-Dichlorobenzene	20.0	20	100	5	40
1,2-Dichloroethane	20.0	24	120	0	23
1,2-Dichloropropane	20.0	22	110	0	40
1,3,5-Trimethylbenzene	20.0	22	110	0	40
1,3-Dichlorobenzene	20.0	20	100	0	40
1,3-Dichloropropane	20.0	22	110	0	40
1,4-Dichlorobenzene	20.0	20	100	5	21
2,2-Dichloropropane	20.0	20	100	0	40
2-Butanone (MEK)	20.0	14	70	0	40
2-Chlorotoluene	20.0	21	105	0	40
2-Hexanone	20.0	15	75	0	40
2-Propanone (acetone)	20.0	11	55	9	40
4-Chlorotoluene	20.0	21	105	5	40
4-Methyl-2-Pentanone(MIBK)	20.0	21	105	5	40
Acrylonitrile	20.0	23	115	4	40
Benzene	20.0	21	105	5	14
Bromobenzene	20.0	21	105	0	40
Bromochloromethane	20.0	22	110	0	40
Bromodichloromethane	20.0	22	110	0	21
Bromoform	20.0	18	90	0	40
Bromomethane	20.0	23	115	4	40
Carbon Disulfide	20.0	22	110	4	40
Carbon tetrachloride	20.0	22	110	0	19
Chlorobenzene	20.0	23	115	0	40
Chloroethane	20.0	24	120	4	40
Chloroform	20.0	24	120	0	16
Chloromethane	20.0	25	125	4	40
Dibromochloromethane	20.0	22	110	0	36
Dibromomethane	20.0	21	105	5	40
Dichlorodifluoromethane	20.0	22	110	0	40
Ethyl Ether	20.0	25	125	0	40
Ethylbenzene	20.0	21	105	5	40
Hexachlorobutadiene	20.0	19	95	5	40
Isopropylbenzene	20.0	21	105	0	40
M/P Xylene	40.0	41	102	3	40
Methyl-t-Butyl Ether	20.0	21	105	5	40
Methylene Chloride	20.0	26	130	4	40
N-Butylbenzene	20.0	22	110	0	40
N-Propylbenzene	20.0	22	110	0	40
Naphthalene	20.0	21	105	0	40

Ortho Xylene	20.0	20	100	5	40
Para-Isopropyltoluene	20.0	21	105	5	40
Sec-Butylbenzene	20.0	22	110	0	40
Styrene	20.0	21	105	0	40
Tert-Butylbenzene	20.0	21	105	0	40
Tetrachloroethylene	20.0	19	95	0	40
Tetrahydrofuran	20.0	24	120	4	40
Toluene	20.0	21	105	5	40
Trans-1,2-Dichloroethylene	20.0	23	115	0	40
Trichloroethylene	20.0	21	105	5	22
Trichlorofluoromethane	20.0	27	135	0	40
Vinyl Acetate	20.0	23	115	0	40
Vinyl Chloride	20.0	27	135	4	19
c-1,3-dichloropropene	20.0	21	105	0	40
cis-1,2-Dichloroethylene	20.0	23	115	0	40
t-1,3-Dichloropropene	20.0	21	105	0	40

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

Henry's Dry Cleaners - Laconia, NH

Sample ID: AB28160

PARAMETER	SAMPLE RESULT ug/L	SAMPLE DUPLICATE RESULT ug/L	PRECISION RPD %	QC LIMITS
1,1,1,2-Tetrachloroethane	ND	ND	ND	30
1,1,1-Trichloroethane	ND	ND	ND	30
1,1,2,2-Tetrachloroethane	ND	ND	ND	30
1,1,2-Trichloro-1,2,2-Trifluoroeth:	ND	ND	ND	30
1,1,2-Trichloroethane	ND	ND	ND	30
1,1-Dichloroethylene	ND	ND	ND	30
1,1-Dichloropropene	ND	ND	ND	30
1,1-dichloroethane	ND	ND	ND	30
1,2,3-Trichlorobenzene	ND	ND	ND	30
1,2,3-Trichloropropane	ND	ND	ND	30
1,2,4-Trichlorobenzene	ND	ND	ND	30
1,2,4-Trimethylbenzene	ND	ND	ND	30
1,2-Dibromo-3-Chloropropane	ND	ND	ND	30
1,2-Dibromoethane	ND	ND	ND	30
1,2-Dichlorobenzene	ND	ND	ND	30
1,2-Dichloroethane	ND	ND	ND	30
1,2-Dichloropropane	ND	ND	ND	30
1,3,5-Trimethylbenzene	ND	ND	ND	30
1,3-Dichlorobenzene	ND	ND	ND	30
1,3-Dichloropropane	ND	ND	ND	30
1,4-Dichlorobenzene	ND	ND	ND	30
2,2-Dichloropropane	ND	ND	ND	30
2-Butanone (MEK)	ND	ND	ND	30
2-Chlorotoluene	ND	ND	ND	30
2-Hexanone	ND	ND	ND	30
2-Propanone (acetone)	ND	ND	ND	30
4-Chlorotoluene	ND	ND	ND	30
4-Methyl-2-Pentanone(MIBK)	ND	ND	ND	30
Acrylonitrile	ND	ND	ND	30
Benzene	ND	ND	ND	30
Bromobenzene	ND	ND	ND	30
Bromochloromethane	ND	ND	ND	30
Bromodichloromethane	ND	ND	ND	30
Bromoform	ND	ND	ND	30
Bromomethane	ND	ND	ND	30
Carbon Disulfide	ND	ND	ND	30
Carbon tetrachloride	ND	ND	ND	30
Chlorobenzene	ND	ND	ND	30
Chloroethane	ND	ND	ND	30
Chloroform	ND	ND	ND	30
Chloromethane	ND	ND	ND	30
Dibromochloromethane	ND	ND	ND	30
Dibromomethane	ND	ND	ND	30
Dichlorodifluoromethane	ND	ND	ND	30
Ethyl Ether	ND	ND	ND	30
Ethylbenzene	ND	ND	ND	30
Hexachlorobutadiene	ND	ND	ND	30
Isopropylbenzene	ND	ND	ND	30
M/P Xylene	ND	ND	ND	30
Methyl-t-Butyl Ether	ND	ND	ND	30

Methylene Chloride	ND	ND	ND	30
N-Butylbenzene	ND	ND	ND	30
N-Propylbenzene	ND	ND	ND	30
Naphthalene	ND	ND	ND	30
Ortho Xylene	ND	ND	ND	30
Para-Isopropyltoluene	ND	ND	ND	30
Sec-Butylbenzene	ND	ND	ND	30
Styrene	ND	ND	ND	30
Tert-Butylbenzene	ND	ND	ND	30
Tetrachloroethylene	ND	ND	ND	30
Tetrahydrofuran	ND	ND	ND	30
Toluene	ND	ND	ND	30
Trans-1,2-Dichloroethylene	ND	ND	ND	30
Trichloroethylene	ND	ND	ND	30
Trichlorofluoromethane	ND	ND	ND	30
Vinyl Acetate	ND	ND	ND	30
Vinyl Chloride	ND	ND	ND	30
c-1,3-dichloropropene	ND	ND	ND	30
cis-1,2-Dichloroethylene	ND	ND	ND	30
t-1,3-Dichloropropene	ND	ND	ND	30

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Fortified Blank (LFB) Results

Henry's Dry Cleaners - Laconia, NH

PARAMETER	LFB AMOUNT SPIKED ug/mL	LFB RESULT ug/mL	LFB RECOVERY %	QC LIMITS %
1,1,1,2-Tetrachloroethane	20	18	90	79 - 136
1,1,1-Trichloroethane	20	18	90	75 - 146
1,1,2,2-Tetrachloroethane	20	18	90	62 - 141
1,1,2-Trichloro-1,2,2-Trifluoroeth	20	18	90	56 - 130
1,1,2-Trichloroethane	20	18	90	75 - 138
1,1-Dichloroethylene	20	18	90	75 - 136
1,1-Dichloropropene	20	19	95	77 - 137
1,1-dichloroethane	20	19	95	76 - 142
1,2,3-Trichlorobenzene	20	18	90	64 - 143
1,2,3-Trichloropropane	20	18	90	66 - 133
1,2,4-Trichlorobenzene	20	18	90	80 - 131
1,2,4-Trimethylbenzene	20	18	90	74 - 155
1,2-Dibromo-3-Chloropropane	20	18	90	37 - 139
1,2-Dibromoethane	20	18	90	72 - 135
1,2-Dichlorobenzene	20	18	90	85 - 128
1,2-Dichloroethane	20	20	100	74 - 138
1,2-Dichloropropane	20	19	95	83 - 124
1,3,5-Trimethylbenzene	20	19	95	80 - 145
1,3-Dichlorobenzene	20	18	90	84 - 130
1,3-Dichloropropane	20	18	90	77 - 129
1,4-Dichlorobenzene	20	18	90	82 - 128
2,2-Dichloropropane	20	18	90	32 - 171
2-Butanone (MEK)	20	18	90	38 - 179
2-Chlorotoluene	20	18	90	78 - 134
2-Hexanone	20	20	100	45 - 158
2-Propanone (acetone)	20	19	95	14 - 209
4-Chlorotoluene	20	19	95	75 - 144
4-Methyl-2-Pentanone(MIBK)	20	19	95	40 - 144
Acrylonitrile	20	18	90	52 - 154
Benzene	20	18	90	83 - 130
Bromobenzene	20	18	90	85 - 126
Bromochloromethane	20	17	85	69 - 137
Bromodichloromethane	20	19	95	70 - 143
Bromoform	20	16	80	51 - 136
Bromomethane	20	18	90	65 - 140
Carbon Disulfide	20	18	90	68 - 140
Carbon tetrachloride	20	19	95	70 - 144
Chlorobenzene	20	19	95	84 - 131
Chloroethane	20	19	95	70 - 134
Chloroform	20	19	95	76 - 141
Chloromethane	20	19	95	63 - 123
Dibromochloromethane	20	19	95	39 - 154
Dibromomethane	20	18	90	79 - 124
Dichlorodifluoromethane	20	16	80	37 - 117
Ethyl Ether	20	19	95	67 - 140
Ethylbenzene	20	18	90	81 - 133
Hexachlorobutadiene	20	18	90	68 - 146
Isopropylbenzene	20	18	90	78 - 137
M/P Xylene	40	36	90	68 - 155
Methyl-t-Butyl Ether	20	17	85	63 - 144
Methylene Chloride	20	20	100	75 - 140
N-Butylbenzene	20	19	95	69 - 147
N-Propylbenzene	20	19	95	76 - 138

Naphthalene	20	18	90	53 - 155
Ortho Xylene	20	18	90	85 - 135
Para-Isopropyltoluene	20	19	95	77 - 141
Sec-Butylbenzene	20	19	95	80 - 141
Styrene	20	18	90	82 - 139
Tert-Butylbenzene	20	18	90	75 - 144
Tetrachloroethylene	20	17	85	32 - 173
Tetrahydrofuran	20	18	90	47 - 149
Toluene	20	18	90	85 - 134
Trans-1,2-Dichloroethylene	20	18	90	80 - 138
Trichloroethylene	20	19	95	76 - 135
Trichlorofluoromethane	20	21	105	60 - 149
Vinyl Acetate	20	18	90	38 - 187
Vinyl Chloride	20	20	100	66 - 133
c-1,3-dichloropropene	20	19	95	68 - 149
cis-1,2-Dichloroethylene	20	18	90	76 - 143
t-1,3-Dichloropropene	20	18	90	62 - 160

Comments: The percent recovery for vinyl chloride did not meet the acceptable QC criteria in the MS/MS study.

LABORATORY FORTIFIED DUPLICATE (LFB Dup) RECOVERY

COMPOUND	LFB Dup CONCENTRATION ug/L	LFB Dup RECOVERY %	RPD %	QC LIMITS RPD
1,1,1,2-Tetrachloroethane	20	100	11	50
1,1,1-Trichloroethane	20	100	11	50
1,1,2,2-Tetrachloroethane	20	100	11	50
1,1,2-Trichloro-1,2,2-Trifluoroetha	20	100	11	50
1,1,2-Trichloroethane	21	105	15	50
1,1-Dichloroethylene	20	100	11	52
1,1-Dichloropropene	20	100	5	50
1,1-dichloroethane	21	105	10	50
1,2,3-Trichlorobenzene	20	100	11	50
1,2,3-Trichloropropane	20	100	11	50
1,2,4-Trichlorobenzene	19	95	5	50
1,2,4-Trimethylbenzene	20	100	11	50
1,2-Dibromo-3-Chloropropane	21	105	15	50
1,2-Dibromoethane	20	100	11	50
1,2-Dichlorobenzene	19	95	5	50
1,2-Dichloroethane	22	110	10	50
1,2-Dichloropropane	20	100	5	50
1,3,5-Trimethylbenzene	20	100	5	50
1,3-Dichlorobenzene	19	95	5	50
1,3-Dichloropropane	20	100	11	50
1,4-Dichlorobenzene	19	95	5	50
2,2-Dichloropropane	20	100	11	50
2-Butanone (MEK)	21	105	15	50
2-Chlorotoluene	20	100	11	50
2-Hexanone	22	110	10	50
2-Propanone (acetone)	22	110	15	50
4-Chlorotoluene	20	100	5	50
4-Methyl-2-Pentanone(MIBK)	22	110	15	50
Acrylonitrile	20	100	11	50
Benzene	20	100	11	50
Bromobenzene	20	100	11	50
Bromochloromethane	20	100	16	50
Bromodichloromethane	21	105	10	50
Bromoform	18	90	12	50
Bromomethane	20	100	11	50
Carbon Disulfide	20	100	11	50
Carbon tetrachloride	20	100	5	50
Chlorobenzene	21	105	10	34
Chloroethane	21	105	10	50
Chloroform	21	105	10	50
Chloromethane	21	105	10	50
Dibromochloromethane	20	100	5	50
Dibromomethane	20	100	11	50
Dichlorodifluoromethane	18	90	12	50
Ethyl Ether	21	105	10	50
Ethylbenzene	20	100	11	50
Hexachlorobutadiene	20	100	11	50
Isopropylbenzene	20	100	11	50
M/P Xylene	39	98	8	50
Methyl-t-Butyl Ether	19	95	11	50
Methylene Chloride	22	110	10	50
N-Butylbenzene	21	105	10	50
N-Propylbenzene	20	100	5	50
Naphthalene	20	100	11	50
Ortho Xylene	20	100	11	50
Para-Isopropyltoluene	20	100	5	50

Sec-Butylbenzene	20	100	5	50
Styrene	20	100	11	50
Tert-Butylbenzene	20	100	11	50
Tetrachloroethylene	18	90	6	50
Tetrahydrofuran	20	100	11	50
Toluene	20	100	11	50
Trans-1,2-Dichloroethylene	20	100	11	50
Trichloroethylene	20	100	5	27
Trichlorofluoromethane	22	110	5	50
Vinyl Acetate	20	100	11	50
Vinyl Chloride	22	110	10	50
c-1,3-dichloropropene	20	100	5	50
cis-1,2-Dichloroethylene	20	100	11	50
t-1,3-Dichloropropene	20	100	11	50

Samples in Batch: AB28160, AB28161, AB28162, AB28163, AB28164, AB28165, AB28166, AB28167, AB28169

PN: 12030016

USEPA Region 1
START III

CHAIN OF CUSTODY RECORD
Henry's Dry Cleaners
Contact Name: Janis Tsang
Contact Phone: 617-413-5053

No: 1-032112-073653-0002
Site #: R01-120316TJ
Lab: NERL/OEME
Lab Contact: Doris Guzman

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0006	GW-01	GEO-5	VOCs	Ground Water	2012-03-20	13:00	4	40 mL Vial	HCl	
	R01-120314JT-0006	GW-01	GEO-5	SVOCs	Ground Water	2012-03-20	13:00	2	1 L Amber		
	R01-120314JT-0007	GW-02	GEO-4	VOCs	Ground Water	2012-03-20	12:55	6	40 mL Vial	HCl	Y
	R01-120314JT-0007	GW-02	GEO-4	SVOCs	Ground Water	2012-03-20	12:55	4	1 L Amber		Y
	R01-120314JT-0008	GW-03	GEO-1	VOCs	Ground Water	2012-03-20	12:15	4	40 mL Vial	HCl	
	R01-120314JT-0008	GW-03	GEO-1	SVOCs	Ground Water	2012-03-20	12:15	2	1 L Amber		
	R01-120314JT-0009	GW-04	GEO-2	VOCs	Ground Water	2012-03-20	12:25	4	40 mL Vial	HCl	
	R01-120314JT-0009	GW-04	GEO-2	SVOCs	Ground Water	2012-03-20	12:25	2	1 L Amber		
	R01-120314JT-0010	GW-05	GEO-3	VOCs	Ground Water	2012-03-20	16:45	4	40 mL Vial	HCl	
	R01-120314JT-0010	GW-05	GEO-3	SVOCs	Ground Water	2012-03-20	16:45	2	1 L Amber		
	R01-120314JT-0011	GW-06	NW-3A	VOCs	Ground Water	2012-03-20	17:35	4	40 mL Vial	HCl	
	R01-120314JT-0011	GW-06	NW-3A	SVOCs	Ground Water	2012-03-20	17:35	2	1 L Amber		
	R01-120314JT-0014	GW-09	GEO-6	VOCs	Ground Water	2012-03-20	17:15	4	40 mL Vial	HCl	
	R01-120314JT-0014	GW-09	GEO-6	SVOCs	Ground Water	2012-03-20	17:15	2	1 L Amber		
	R01-120314JT-0021	SO3273	PE 05-004	VOCs	PE	2012-03-20	07:00	1	Vial		
	R01-120314JT-0022	VLM0804	PE 95-001/02	SVOCs	PE	2012-03-20	07:00	1	Vial		
	R01-120314JT-0023	RB-01		VOCs	Equipment Blank	2012-03-20	17:30	4	40 mL Vial	HCl	
	R01-120314JT-0023	RB-01		SVOCs	Equipment Blank	2012-03-20	17:30	2	1 L Amber		

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	[signature]	3/21/12	[signature]	3/21/12	0915	Delivered to OEME	[signature]	3/21/12	[signature]	3/21/12	11:10

Appendix D

Photodocumentation Log

PHOTODOCUMENTATION LOG
Henry's Dry Cleaners ● Laconia, New Hampshire

SCENE: View of groundwater monitoring well MW-102. Photograph taken facing north.
DATE: 6 October 2011 **TIME:** 1110 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of monitoring well OSW-1 and catchbasin. Photograph taken facing east.
DATE: 6 October 2011 **TIME:** 1111 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the Former Allen Rogers Mill (FARM) property. Photograph taken facing southeast.
DATE: 6 October 2011 **TIME:** 1112 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the path between Beacon Street West Condominums (BSWC) Building No. 6 and Building No. 3 on the former FARM property. Photograph taken facing northeast.
DATE: 6 October 2011 **TIME:** 1120 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of BSWC Building No. 3 (unoccupied). Photograph taken facing east.
DATE: 6 October 2011 **TIME:** 1120 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of Building No.8 and parking area.
DATE: 6 October 2011 **TIME:** 1120 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the Winnipesaukee River. Photograph taken facing west
DATE: 6 October 2011 **TIME:** 1123 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: Upstream view of the Winnipesaukee River. Photograph taken facing east.
DATE: 6 October 2011 **TIME:** 1123 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of groundwater monitoring well GEO-3. Photograph taken facing northwest.
DATE: 6 October 2011 **TIME:** 1123 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the Perley Canal. Photograph taken facing north.
DATE: 6 October 2011 **TIME:** 1129 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the south side of the BSWC. Photograph taken facing west.
DATE: 6 October 2011 **TIME:** 1149 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the southern side of Henry's Dry Cleaners. Photograph taken facing north.
DATE: 6 October 2011 **TIME:** 1150 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of fill pipes for aboveground storage tanks (ASTs) and underground storage tanks (USTs).
DATE: 6 October 2011 **TIME:** 1151 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of an air compressor inside Henry's Dry Cleaners.
DATE: 6 October 2011 **TIME:** 1159 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the dry cleaning machine inside Henry's Dry Cleaners.
DATE: 6 October 2011 **TIME:** 1206 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the integrity of the concrete slab, located in the basement of Henry's Dry Cleaners.
DATE: 6 October 2011 **TIME:** 1206 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the dry cleaning machinery and equipment inside the Henry's Dry Cleaners facility.
DATE: 6 October 2011 **TIME:** 1206 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the oil tank inside the Henry's Dry Cleaners facility.
DATE: 6 October 2011 **TIME:** 1209 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

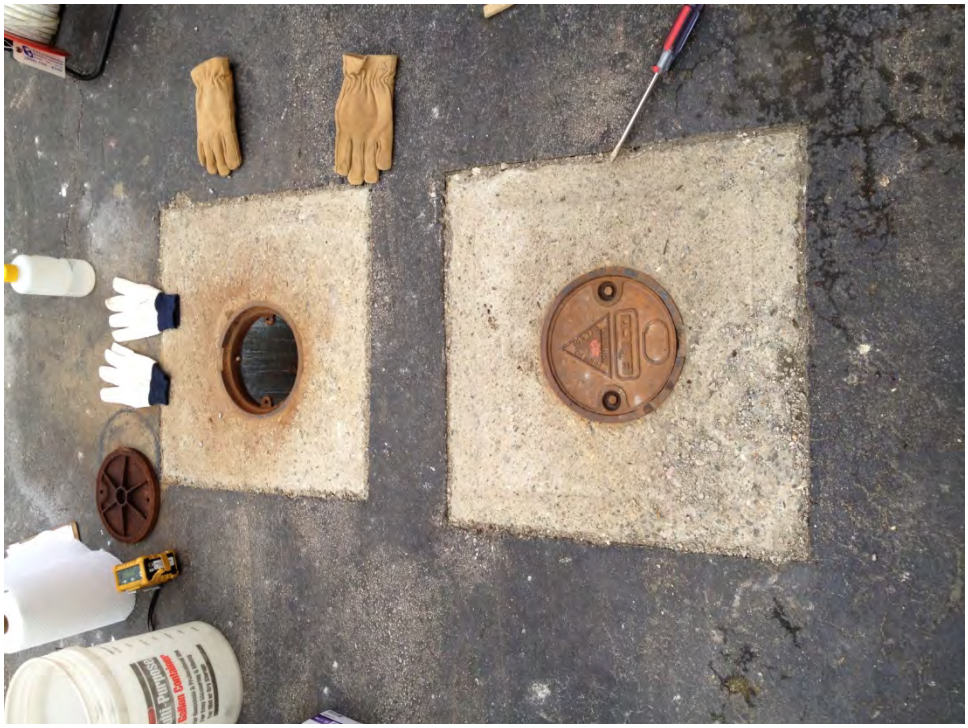
SCENE: View of refrigerator used to store spot cleaning chemicals.
DATE: 6 October 2011 **TIME:** 1212 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of dry cleaning operations at the Henry's Dry Cleaners facility.
DATE: 6 October 2011 **TIME:** 1213 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of Laconia Savings Bank, bordering Henry's Dry Cleaners to the northwest. Photograph taken facing northwest.
DATE: 6 October 2011 **TIME:** 1224 hours
PHOTOGRAPHER: Colin Cardin **CAMERA:** E5600

SCENE: View of monitoring well MW-103. Photograph taken facing east.
DATE: 27 February 2012 **TIME:** 0937 hours
PHOTOGRAPHER: George Mavris **CAMERA:** iPhone 4S

TOP



SCENE: View of monitoring wells MW-101S and MW-101D. Photograph taken facing northeast.
DATE: 27 February 2012 **TIME:** 1015 hours
PHOTOGRAPHER: George Mavris **CAMERA:** iPhone 4S

TOP

SCENE: View of monitoring well MW-102.
DATE: 27 February 2012 **TIME:** 1030 hours
PHOTOGRAPHER: George Mavris **CAMERA:** iPhone 4S

SCENE: View of nested monitoring well NW-3.
DATE: 27 February 2012 **TIME:** 1300 hours
PHOTOGRAPHER: George Mavris **CAMERA:** iPhone 4S

SCENE: View of the mastic floor tile being collected for asbestos analysis.
DATE: 14 March 2012 **TIME:** 1036 hours
PHOTOGRAPHER: Mark Hall **CAMERA:** iPhone 4S

SCENE: View of the floor tile samples being collected for asbestos analysis.
DATE: 14 March 2012 **TIME:** 1048 hours
PHOTOGRAPHER: Mark Hall **CAMERA:** iPhone 4S

SCENE: View of Henry's Dry Cleaners. Photograph taken facing southeast.
DATE: 19 March 2012 **TIME:** 1506 hours
PHOTOGRAPHER: George Mavris **CAMERA:** iPhone 4S

SCENE: View of Membrane Interface Probe (MIP) activities occurring at the south side of Henry's Dry Cleaners. Photograph taken facing northeast.
DATE: 20 March 2012 **TIME:** 1104 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the EPA MCP stationed adjacent to Building No. 3.
DATE: 20 March 2012 **TIME:** 1105 hours
PHOTOGRAPHER: Mark Hall **CAMERA:** iPhone 4S

SCENE: View of the interior of Building No. 3.
DATE: 20 March 2012 **TIME:** 1155 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of MIP boring MIP-01. Photograph taken facing east.
DATE: 20 March 2012 **TIME:** 1259 hours
PHOTOGRAPHER: George Mavris **CAMERA:** iPhone 4S

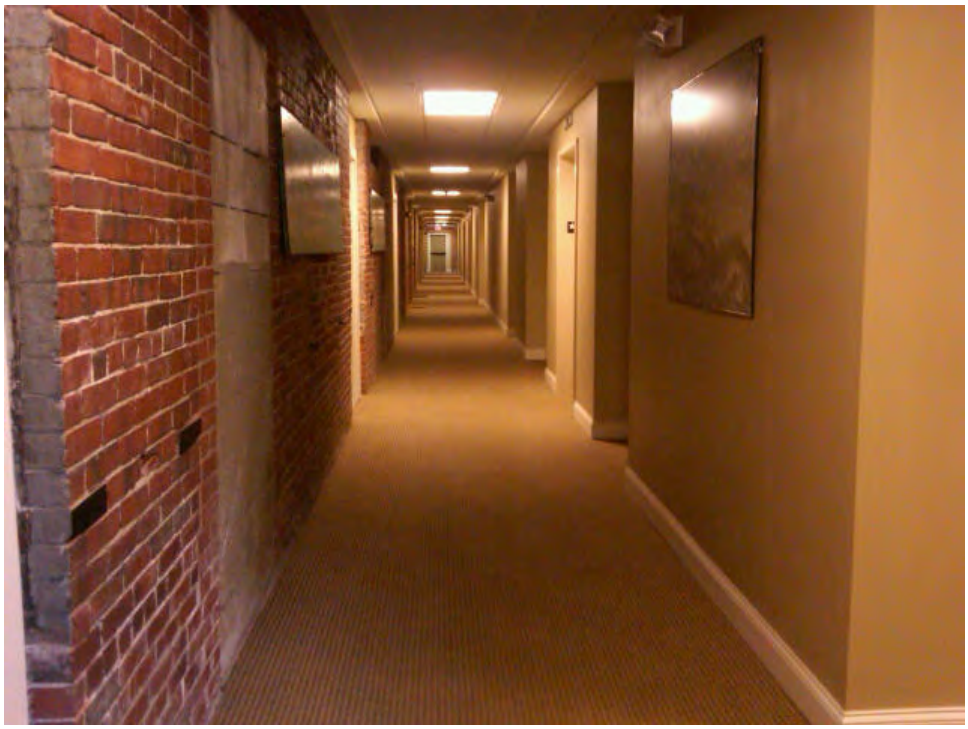
SCENE: View of Investigation Derived Waste (IDW) drums prior to sampling and disposal. Photograph taken facing north.
DATE: 21 March 2012 **TIME:** 0825 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of MIP activities on the Goodwill Industries property. Photograph taken facing south.
DATE: 21 March 2012 **TIME:** 0955 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the MIP-equipped Geoprobe rig.
DATE: 21 March 2012 **TIME:** 0954 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the Trace Atmospheric Gas Analyzer (TAGA) conducting ambient mobile air monitoring.
DATE: 21 March 2012 **TIME:** 0833 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of location MIP-18 with the EPA Mobile Command Post (MCP) in the background. Photograph taken facing east.
DATE: 23 March 2012 **TIME:** 0953 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600



SCENE: View of the hallways inside Building No. 6.
DATE: 23 March 2012 **TIME:** 1155 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of MIP activities occurring on the south side of Building No.6. Photograph taken facing northwest.
DATE: 23 March 2012 **TIME:** 1431 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the FARM property and a marked MIP location. Photographs taken facing north.
DATE: 27March 2012 **TIME:** 0844 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the cut sleeve of MIP-30 (0-5 feet).
DATE: 27 March 2012 **TIME:** 1547 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

SCENE: View of the hollow stem auger drill rig completing a soil boring at location MIP-16.
DATE: 30 March 2012 **TIME:** 0830 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

PHOTODOCUMENTATION LOG
Henry's Dry Cleaners ● Laconia, New Hampshire

SCENE: View of the IDW drums awaiting disposal.
DATE: 30 March 2012 **TIME:** 1030 hours
PHOTOGRAPHER: George Mavris **CAMERA:** E5600

Appendix E

Chain-of-Custody Records

90

JB3137 PN

Lockheed Martin SERAS
2890 Woodbridge Ave
Bldg. 209
Edison, NJ

CHAIN OF CUSTODY RECORD
Site #: SERA0173
David Edgerton
(609) 529-3725

No: SERA0173-04/02/12-0001

ACCUTEST
(732) 329-0200

Lab #	Sample #	Location	Analyses	Matrix	Collected		Numb Cont	Container	Preservative	MS/MSD
-1	SERA0173-0001	MIP3-(16-17)	TPH (GRO, DRO, ORO)	Soil	3/29/2012		1	8oz Amber	4 C	
-2	SERA0173-0002	MIP3- (19-20)	TPH (GRO, DRO, ORO)	Soil	3/29/2012	1815	1	8oz Amber	4 C	
-3	SERA0173-0003	MIP4-(13-14)	TPH (GRO, DRO, ORO)	Soil	3/29/2012	1125	1	8oz Amber	4 C	
-4	SERA0173-0004	MIP-14-(10-15)	TPH (GRO, DRO, ORO)	Soil	3/29/2012	0925	1	8oz Amber	4 C	
-5	SERA0173-0005	MIP-17-(5-10)	TPH (GRO, DRO, ORO)	Soil	3/28/2012	0900	1	8oz Amber	4 C	
-6	SERA0173-0006	MIP21-(0-5)	TPH (GRO, DRO, ORO)	Soil	3/28/2012	1245	1	8oz Amber	4 C	
-7	SERA0173-0007	MIP21-(5-10)	TPH (GRO, DRO, ORO)	Soil	3/28/2012	1300	1	8oz Amber	4 C	
-8	SERA0173-0008	MIP21-(5-10A)	TPH (GRO, DRO, ORO)	Soil	3/28/2012	1310	1	8oz Amber	4 C	
-9	SERA0173-0009	MIP24-(5-10)	TPH (GRO, DRO, ORO)	Soil	3/28/2012	1605	1	8oz Amber	4 C	
-10	SERA0173-0010	MIP24-(10-15)	TPH (GRO, DRO, ORO)	Soil	3/28/2012	1630	1	8oz Amber	4 C	
-11	SERA0173-0011	MIP30-(0-5)	TPH (GRO, DRO, ORO)	Soil	3/27/2012	0900	1	8oz Amber	4 C	
-12	SERA0173-0012	SB31-(0-5)	TPH (GRO, DRO, ORO)	Soil	3/28/2012	1445	1	8oz Amber	4 C	
						*				

Special Instructions: *added in SM 4/2/12 (MM)

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
12/ANALYSIS	[signature]	4/2/12	[signature]	4/2/12	1630						

46 a IR

11

USEPA
DateShipped: 4/2/2012
CarrierName: START
AirbillNo: Hand Delivered

CHAIN OF CUSTODY RECORD
Site #: R01-040212JT
Contact Name: David Edgerton
Contact Phone: (727) 494-4057

No: 1-040212-084056-0001
Lab: Geoexpertise
Lab Address: 125 Nagog Park
Acton, MA

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	R01-040212JT-0001	MIP-3 (10-11 ft)	Total Organic Carbon	Soil	3/29/2012	11:45	1	4 0z. jar	4 C	
	R01-040212JT-0002	MIP-4 (34-35 ft)	Total Organic Carbon	Soil	3/29/2012	15:15	1	4 0z. jar	4 C	
	R01-040212JT-0003	MIP-14 (20-21 ft)	Total Organic Carbon	Soil	3/29/2012	10:10	1	4 0z. jar	4 C	
	R01-040212JT-0004	MIP-17 (15-16 ft)	Total Organic Carbon	Soil	3/28/2012	09:45	1	4 0z. jar	4 C	
	R01-040212JT-0005	MIP-24 (20-21 ft)	Total Organic Carbon	Soil	3/28/2012	17:30	1	4 0z. jar	4 C	
	R01-040212JT-0006	MIP-30 (18-19 ft)	Total Organic Carbon	Soil	3/27/2012	11:45	1	4 0z. jar	4 C	
	R01-040212JT-0007	MIP-4 (19-24 ft)	Dry Bulk Density	Soil	3/29/2012	12:00	1	Macrocore liner	None	
	R01-040212JT-0008	MIP-16 (13-14 ft)	Dry Bulk Density	Soil	3/30/2012	09:35	1	Macrocore liner	None	
	R01-040212JT-0009	MIP-24 (16-17 ft)	Dry Bulk Density	Soil	3/28/2012	17:00	1	Macrocore liner	None	
	R01-040212JT-0010	MIP-16 (45-46 ft)	Dry Bulk Density	Soil	3/30/2012	13:15	1	Macrocore liner	None	
	R01-040212JT-0011	MIP-4 (35-36 ft)	Dry Bulk Density	Soil	3/29/2012	15:05	1	Macrocore liner	None	
	R01-040212JT-0012	MIP-3 (18-19 ft)	Dry Bulk Density	Soil	3/29/2012	17:30	1	Macrocore liner	None	
	R01-040212JT-0013	MIP-16 (14-15 ft)	Total Organic Carbon	Soil	3/30/2012	09:35	1	4 Oz. jar	None	

Special Instructions: TOC method SW 846 9060A, Bulk density method ASTM D7263-09, Moisture method ASTM D2216-1-10

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time

USEPA
DateShipped: 4/2/2012
CarrierName: START
AirbillNo: Hand Delivered

CHAIN OF CUSTODY RECORD
Site #: R01-040212JT
Contact Name: David Edgerton
Contact Phone: (727) 494-4057

No: 1-040212-084056-0001
Lab: Geoexpertise
Lab Address: 125 Nagog Park
Acton, MA

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	MS/MSD
	R01-040212JT-0001	MIP-3 (10-11 ft)	Total Organic Carbon	Soil	3/29/2012	1	4 0z. jar	4 C	
	R01-040212JT-0002	MIP-4 (34-35 ft)	Total Organic Carbon	Soil	3/29/2012	1	4 0z. jar	4 C	
	R01-040212JT-0003	MIP-14 (20-21 ft)	Total Organic Carbon	Soil	3/29/2012	1	4 0z. jar	4 C	
	R01-040212JT-0004	MIP-17 (15-16 ft)	Total Organic Carbon	Soil	3/28/2012	1	4 0z. jar	4 C	
	R01-040212JT-0005	MIP-24 (20-21 ft)	Total Organic Carbon	Soil	3/28/2012	1	4 0z. jar	4 C	
	R01-040212JT-0006	MIP-30 (18-19 ft)	Total Organic Carbon	Soil	3/27/2012	1	4 0z. jar	4 C	
	R01-040212JT-0007	MIP-4 (19-24 ft)	Dry Bulk Density	Soil	3/29/2012	1	Macrocore liner	None	
	R01-040212JT-0008	MIP-16 (13-14 ft)	Dry Bulk Density	Soil	3/30/2012	1	Macrocore liner	None	
	R01-040212JT-0009	MIP-24 (16-17 ft)	Dry Bulk Density	Soil	3/28/2012	1	Macrocore liner	None	
	R01-040212JT-0010	MIP-16 (45-46 ft)	Dry Bulk Density	Soil	3/30/2012	1	Macrocore liner	None	
	R01-040212JT-0011	MIP-4 (35-36 ft)	Dry Bulk Density	Soil	3/29/2012	1	Macrocore liner	None	
	R01-040212JT-0012	MIP-3 (18-19 ft)	Dry Bulk Density	Soil	3/29/2012	1	Macrocore liner	None	
	R01-040212JT-0013	MIP-16 (14-15 ft)	Total Organic Carbon	Soil	3/30/2012	1	4 Oz. jar	None	

Special Instructions: TOC method SW 846 9060A, Bulk density method ASTM D7263-09, Moisture method ASTM D2216-1-10

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Lab delivery	[signature]	4/2/12									
							[signature]		[signature]	4/2/12	10:49 am

 PN 12030028

USEPA Region 1

START III

CHAIN OF CUSTODY RECORD

Henry's Dry Cleaners

Contact Name: Janis Tsang

Contact Phone: 617-413-5053

No: 1-033012-113943-0005

Site #: R01-120316TJ

Lab: NERL/OEME

Lab Contact: Doris Guzman

Lab #	Sample #	Location	Analyses	Collected	Sample Time	Matrix		Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0081	IDW-01	Flashpoint	3/30/2012	08:35	Water		1	500 mL Poly	4 C	
	R01-120314JT-0081	IDW-01	pH	3/30/2012	08:35	Water		1	500 mL Poly	4 C	
	R01-120314JT-0081	IDW-01	RCRA8 Metals	3/30/2012	08:35	Water		1	500 mL Poly	HNO3 pH<2	
	R01-120314JT-0081	IDW-01	PCBs	3/30/2012	08:35	Water		2	1 liter amber	4 C	
	R01-120314JT-0081	IDW-01	Pesticides	3/30/2012	08:35	Water		2	1 liter amber	4 C	
	R01-120314JT-0081	IDW-01	SVOCs	3/30/2012	08:35	Water		2	1 liter amber	4 C	
	R01-120314JT-0081	IDW-01	VOCs	3/30/2012	08:35	Water		4	40 ml VOA	HCl pH<2	
	R01-120314JT-0082	IDW-02	Flashpoint	3/30/2012	09:30	Soil		1	2 oz Glass	4 C	
	R01-120314JT-0082	IDW-02	pH	3/30/2012	09:30	Soil		1	4 oz Glass	4 C	
	R01-120314JT-0082	IDW-02	RCRA8 Metals	3/30/2012	09:30	Soil		1	4 oz Glass	4 C	
	R01-120314JT-0082	IDW-02	PCBs	3/30/2012	09:30	Soil		1	8 oz Glass	4 C	

Special Instructions:

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time		Items/Reason	Relinquished By	Date	Received by	Date	Time
	BWR	3/30/12	[illegible]	3/30/12	15:38							

PN: 1203 0028

USEPA Region 1

START III

CHAIN OF CUSTODY RECORD

Henry's Dry Cleaners

Contact Name: Janis Tsang

Contact Phone: 617-413-5053

No: 1-033012-113943-0005

Site #: R01-120316TJ

Lab: NERL/OEME

Lab Contact: Doris Guzman

Lab #	Sample #	Location	Analyses	Collected	Sample Time	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0082	IDW-02	Pesticides	3/30/2012	09:30	Soil	1	8 oz Glass	4 C	
	R01-120314JT-0082	IDW-02	SVOCs	3/30/2012	09:30	Soil	1	4 oz Glass	4 C	
	R01-120314JT-0082	IDW-02	VOCs	3/30/2012	09:30	Soil	1	40 mL vial	MeOH	

Special Instructions:

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	[illegible]	3/30/12	[illegible]	3/30/12	15.38						

 PN: 12030029

USEPA Region 1
START III

CHAIN OF CUSTODY RECORD
Henry's Dry Cleaners
Contact Name: Janis Tsang
Contact Phone: 617-413-5053

No: 1-033012-120240-0007
Site #: R01-120316TJ
Lab: NERL/OEME
Lab Contact: Doris Guzman

Lab #	Sample #	Location	Analyses	Collected	Sample Time	Matrix	Numb Cont	Container	Preservative	Sample_Remarks	MS/MSD
	R01-120314JT-0025	MIP 14 (14-15)	SVOCs	3/29/2012	09:25	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0029	MIP 30 (6-7)	SVOCs	3/27/2012	16:05	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0031	MIP 30 (18-19)	SVOCs	3/27/2012	16:45	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0032	MIP 30 (20-21)	VOCs	3/27/2012	16:55	Soil	1	40 mL vial	MeOH	8.69 g	
	R01-120314JT-0036	MIP 17 (8-9)	SVOCs	3/28/2012	09:00	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0040	MIP 17 (23-24)	VOCs	3/28/2012	10:00	Soil	1	40 mL vial	MeOH	7.09 g	
	R01-120314JT-0050	SB-31 (2-3)	SVOCs	3/28/2012	14:50	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0054	SB-31 (17-17.5)	VOCs	3/28/2012	15:25	Soil	1	40 mL vial	MeOH	10.64 g	
	R01-120314JT-0057	MIP 24 (12-13)	SVOCs	3/28/2012	16:20	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0060	MIP 24 (8-9)	SVOCs	3/28/2012	16:10	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0063	MB-01	VOCs	3/28/2012	07:40	Methanol Blank	1	40 mL vial	MeOH		

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	BENC	3/30/12	[illegible]	3/30/12	15:46						

PN 12U30029

USEPA Region 1

START III

CHAIN OF CUSTODY RECORD

Henry's Dry Cleaners

Contact Name: Janis Tsang

Contact Phone: 617-413-5053

No: 1-033012-120240-0007

Site #: R01-120316TJ

Lab: NERL/OEME

Lab Contact: Doris Guzman

Lab #	Sample #	Location	Analyses	Collected	Sample Time	Matrix	Numb Cont	Container	Preservative	Sample_Remarks	MS/MSD
	R01-120314JT-0065	MIP 4 (3-4)	SVOCs	3/29/2012	10:45	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0067	MIP 4 (10-11)	VOCs	3/29/2012	11:05	Soil	1	40 mL vial	MeOH	6.51	
	R01-120314JT-0068	MIP 4 (13-14) A	VOCs	3/29/2012	11:15	Soil	1	40 mL vial	MeOH	9.86	
	R01-120314JT-0074	MIP 4 (23-24)	VOCs	3/29/2012	13:00	Soil	1	40 mL vial	MeOH	9.12 g	
	R01-120314JT-0075	MIP 4 (23-24)	SVOCs	3/29/2012	13:05	Soil	1	8 oz Glass	4 C		
	R01-120314JT-0084	MIP 3 (16-17)	VOCs	3/29/2012	16:25	Soil	1	40 mL vial	MeOH	5.21 g	
	R01-120314JT-0086	MIP 3 (18-19)	VOCs	3/29/2012	17:35	Soil	1	40 mL vial	MeOH	10.09 g	
	R01-120314JT-0093	MIP 16 (22-23)	VOCs	3/30/2012	09:55	Soil	1	40 mL vial	MeOH	9.11	
	R01-120314JT-0099	PE-MLV0051	VOCs	3/30/2012	07:30	PE	1	2 oz Ampule	4 C		
	R01-120314JT-0100	PE-SS2067	SVOCs	3/30/2012	07:30	PE	1	2 oz Amber	4 C		
	R01-120314JT-0101	MIP 16 (31-32)	VOCs	3/30/2012	10:55	Soil	1	40 mL vial	MeOH	9.54 g	

Special Instructions:

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	[illegible]	3/30/12	[illegible]	3/30/12	15:46						

 PN 12030028

USEPA Region 1

START III

CHAIN OF CUSTODY RECORD

Henry's Dry Cleaners

Contact Name: Janis Tsang

Contact Phone: 617-413-5053

No: 1-033012-113943-0005

Site #: R01-120316TJ

Lab: NERL/OEME

Lab Contact: Doris Guzman

Lab #	Sample #	Location	Analyses	Collected	Sample Time	Matrix		Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0081	IDW-01	Flashpoint	3/30/2012	08:35	Water		1	500 mL Poly	4 C	
	R01-120314JT-0081	IDW-01	pH	3/30/2012	08:35	Water		1	500 mL Poly	4 C	
	R01-120314JT-0081	IDW-01	RCRA8 Metals	3/30/2012	08:35	Water		1	500 mL Poly	HNO3 pH<2	
	R01-120314JT-0081	IDW-01	PCBs	3/30/2012	08:35	Water		2	1 liter amber	4 C	
	R01-120314JT-0081	IDW-01	Pesticides	3/30/2012	08:35	Water		2	1 liter amber	4 C	
	R01-120314JT-0081	IDW-01	SVOCs	3/30/2012	08:35	Water		2	1 liter amber	4 C	
	R01-120314JT-0081	IDW-01	VOCs	3/30/2012	08:35	Water		4	40 ml VOA	HCl pH<2	
	R01-120314JT-0082	IDW-02	Flashpoint	3/30/2012	09:30	Soil		1	2 oz Glass	4 C	
	R01-120314JT-0082	IDW-02	pH	3/30/2012	09:30	Soil		1	4 oz Glass	4 C	
	R01-120314JT-0082	IDW-02	RCRA8 Metals	3/30/2012	09:30	Soil		1	4 oz Glass	4 C	
	R01-120314JT-0082	IDW-02	PCBs	3/30/2012	09:30	Soil		1	8 oz Glass	4 C	

Special Instructions:

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time		Items/Reason	Relinquished By	Date	Received by	Date	Time
	BWR	3/30/12	[illegible]	3/30/12	15:38							

PN: 1203 0028

USEPA Region 1

START III

CHAIN OF CUSTODY RECORD

Henry's Dry Cleaners

Contact Name: Janis Tsang

Contact Phone: 617-413-5053

No: 1-033012-113943-0005

Site #: R01-120316TJ

Lab: NERL/OEME

Lab Contact: Doris Guzman

Lab #	Sample #	Location	Analyses	Collected	Sample Time	Matrix	Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0082	IDW-02	Pesticides	3/30/2012	09:30	Soil	1	8 oz Glass	4 C	
	R01-120314JT-0082	IDW-02	SVOCs	3/30/2012	09:30	Soil	1	4 oz Glass	4 C	
	R01-120314JT-0082	IDW-02	VOCs	3/30/2012	09:30	Soil	1	40 mL vial	MeOH	

Special Instructions:

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	[illegible]	3/30/12	[illegible]	3/30/12	15.38						

PN 12030018

USEPA Region 1
START III

CHAIN OF CUSTODY RECORD
Henry's Dry Cleaners
Contact Name: Janis Tsang
Contact Phone: 617-413-5053

No: 1-032212-143950-0004
Site #: R01-120316TJ
Lab: NERL/OEME
Lab Contact: Doris Guzman

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0015 ✓	GW-10	OSW-1	VOCs	Ground Water	2012-03-22	12:40	4	40 mL Vial	HCl	
	R01-120314JT-0015	GW-10	OSW-1	SVOCs	Ground Water	2012-03-22	12:40	2	1 L Amber		
	R01-120314JT-0018 ✓	GW-13	MW-101S	VOCs	Ground Water	2012-03-22	11:15	4	40 mL Vial	HCl	
	R01-120314JT-0018	GW-13	MW-101S	SVOCs	Ground Water	2012-03-22	11:15	2	1 L Amber		

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	[illegible]	3/22/12	[illegible]	3/22/12	1505	OEME	[illegible]	3/23/12	[illegible]	3/23/12	7:53

USEPA Region 1
START III

CHAIN OF CUSTODY RECORD
Henry's Dry Cleaners
Contact Name: Janis Tsang
Contact Phone: 617-413-5053

No: 1-032212-201823-0003
Site #: R01-120316TJ
Lab: NERL/OEME
Lab Contact: Doris Guzman

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0012	GW-07 ✓	NW-3B	SVOCs	Ground Water	2012-03-21	11:55	2	1 L Amber		
	R01-120314JT-0012 ✓	GW-07	NW-3B	VOCs	Ground Water	2012-03-21	11:55	4	40 mL Vial	HCl	
	R01-120314JT-0013	GW-08 ✓	NW-3C	SVOCs	Ground Water	2012-03-21	17:20	2	1 L Amber		
	R01-120314JT-0013 ✓	GW-08	NW-3C	VOCs	Ground Water	2012-03-21	17:20	4	40 mL Vial	HCl	
	R01-120314JT-0016	GW-11 ✓	MW-102	SVOCs	Ground Water	2012-03-21	17:20	2	1 L Amber		
	R01-120314JT-0016 ✓	GW-11	MW-102	VOCs	Ground Water	2012-03-21	17:20	4	40 mL Vial	HCl	
	R01-120314JT-0017	GW-12 ✓	MW-101D	SVOCs	Ground Water	2012-03-21	16:45	2	1 L Amber		
	R01-120314JT-0017 ✓	GW-12	MW-101D	VOCs	Ground Water	2012-03-21	16:45	4	40 mL Vial	HCl	
	R01-120314JT-0019	GW-14 ✓	MW-103	SVOCs	Ground Water	2012-03-21	12:50	2	1 L Amber		
	R01-120314JT-0019 ✓	GW-14	MW-103	VOCs	Ground Water	2012-03-21	12:50	4	40 mL Vial	HCl	
	R01-120314JT-0020	GW-15 ✓	MW-102	SVOCs	Ground Water	2012-03-21	17:20	2	1 L Amber		
	R01-120314JT-0020 ✓	GW-15	MW-102	VOCs	Ground Water	2012-03-21	17:20	4	40 mL Vial	HCl	
	R01-120314JT-0024	RB-02 ✓		SVOCs	Equipment Blank	2012-03-21	18:00	2	1 L Amber		
	R01-120314JT-0024 ✓	RB-02		VOCs	Equipment Blank	2012-03-21	18:00	4	40 mL Vial	HCl	

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
ALL	[illegible]	3/22/12	Paul [illegible]	3/22/12	0907	ALL	Paul [illegible]	3/22/12	[illegible]	3/22/12	1134

PN: 12030016

USEPA Region 1
START III

CHAIN OF CUSTODY RECORD
Henry's Dry Cleaners
Contact Name: Janis Tsang
Contact Phone: 617-413-5053

No: 1-032112-073653-0002
Site #: R01-120316TJ
Lab: NERL/OEME
Lab Contact: Doris Guzman

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	R01-120314JT-0006	GW-01	GEO-5	VOCs	Ground Water	2012-03-20	13:00	4	40 mL Vial	HCl	
	R01-120314JT-0006	GW-01	GEO-5	SVOCs	Ground Water	2012-03-20	13:00	2	1 L Amber		
	R01-120314JT-0007	GW-02	GEO-4	VOCs	Ground Water	2012-03-20	12:55	6	40 mL Vial	HCl	Y
	R01-120314JT-0007	GW-02	GEO-4	SVOCs	Ground Water	2012-03-20	12:55	4	1 L Amber		Y
	R01-120314JT-0008	GW-03	GEO-1	VOCs	Ground Water	2012-03-20	12:15	4	40 mL Vial	HCl	
	R01-120314JT-0008	GW-03	GEO-1	SVOCs	Ground Water	2012-03-20	12:15	2	1 L Amber		
	R01-120314JT-0009	GW-04	GEO-2	VOCs	Ground Water	2012-03-20	12:25	4	40 mL Vial	HCl	
	R01-120314JT-0009	GW-04	GEO-2	SVOCs	Ground Water	2012-03-20	12:25	2	1 L Amber		
	R01-120314JT-0010	GW-05	GEO-3	VOCs	Ground Water	2012-03-20	16:45	4	40 mL Vial	HCl	
	R01-120314JT-0010	GW-05	GEO-3	SVOCs	Ground Water	2012-03-20	16:45	2	1 L Amber		
	R01-120314JT-0011	GW-06	NW-3A	VOCs	Ground Water	2012-03-20	17:35	4	40 mL Vial	HCl	
	R01-120314JT-0011	GW-06	NW-3A	SVOCs	Ground Water	2012-03-20	17:35	2	1 L Amber		
	R01-120314JT-0014	GW-09	GEO-6	VOCs	Ground Water	2012-03-20	17:15	4	40 mL Vial	HCl	
	R01-120314JT-0014	GW-09	GEO-6	SVOCs	Ground Water	2012-03-20	17:15	2	1 L Amber		
	R01-120314JT-0021	SO3273	PE 05-004	VOCs	PE	2012-03-20	07:00	1	Vial		
	R01-120314JT-0022	VLM0804	PE 95-001/02	SVOCs	PE	2012-03-20	07:00	1	Vial		
	R01-120314JT-0023	RB-01		VOCs	Equipment Blank	2012-03-20	17:30	4	40 mL Vial	HCl	
	R01-120314JT-0023	RB-01		SVOCs	Equipment Blank	2012-03-20	17:30	2	1 L Amber		

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	[signature]	3/21/12	[signature]	3/21/12	0915	Delivers to OEME	[signature]	3/21/12	[signature]	3/21/12	11:10

Attachment A

Source Investigation and Preliminary Conceptual Site Model (CSM) of the Henry's Dry Cleaner Chlorinated Solvent Site, Laconia, New Hampshire: Technical Memorandum SERAS WA#0-173

LOCKHEED MARTIN

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Environmental Services SERAS
2890 Woodbridge Avenue, Building 209 Annex
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DATE: July 6, 2012

TO: Terrence Johnson, U.S. EPA/ERT Work Assignment Manager

THROUGH: Rick Leuser, SERAS Deputy Program Manager

FROM: David Edgerton, SERAS Task Leader JB for DGE

SUBJECT: SOURCE INVESTIGATION AND PRELIMINARY CONCEPTUAL SITE MODEL (CSM) OF THE HENRY'S DRY CLEANER CHLORINATED SOLVENT SITE, LACONIA, NEW HAMPSHIRE: TECHNICAL MEMORANDUM SERAS WA#0-173

1.0 BACKGROUND

Henry's Dry Cleaners (Site) is located on a small parcel at 36 Pleasant Street in Laconia, New Hampshire (Figure 1). The Site includes a one-story building and a small paved parking lot (Figure 2). The southern portion of the HDC building is constructed on a concrete slab and northern portion over a full basement. East of the Site is the Goodwill Industries (GWI) property, and to the south of the Site is the Beacon Street West Condominium, a residential complex on the Former Allen Rogers Mill (FARM) property.

The Site has operated as a dry cleaner since the early 1970s; however, drawings from the 1885 to 1976 Sanborn Maps indicate the Site may have operated as a dry cleaner since 1948 (EDR, 2012). The FARM property is hydraulically downgradient of the Site, and the former industrial facility was redeveloped into condominiums. The Winnipesaukee River (River) flows along the southern boundary of the FARM property (Figures 1 and 2).

The FARM property has a history of petroleum hydrocarbon contamination in both soils and shallow groundwater that is associated with abandoned aboveground (ASTs) and underground (USTs) storage tanks that were removed from the property. From 1986 to 2006, the New Hampshire Department of Environmental Services (NHDES) Leaking Underground Storage Tank Trust Fund (LUST) funded multiple groundwater investigations on the FARM property to assess petroleum hydrocarbon contamination (Heynen, 1986; CPI, 2004 and 2006; SCI, 2010). During the investigation, tetrachloroethene (PCE), and its derivatives (trichloroethene (TCE), cis-1,2-dichloroethene (c-1,2-DCE) and vinyl chloride (VC)) were identified in the groundwater exceeding the NHDES Class A Groundwater Quality Standard (AGQS). PCE is most commonly used as a dry cleaning fluid, and according to historic records and reports was not used in either manufacturing or industrial processes on the FARM property. The solvent PCE, and its derivatives, belong to a class of contaminants known as chlorinated volatile organic compounds (CVOC).

In 2008, at the request of the NHDES, the Environmental Protection Agency (EPA) Region 1 Site Assessment Program, Technical and Enforcement Support Section conducted a PCE source investigation at the Site. Analytical results confirmed the presence of CVOCs in groundwater with concentrations up to 24,000 micrograms per liter (µg/L) PCE, 28 µg/L TCE, and 370 µg/L c-1,2-DCE; and soil concentrations up to 30,000 micrograms per kilogram (µg/kg) PCE and 140 µg/kg (TCE). The highest concentrations in groundwater and soil were found directly south of the HDC building, suggesting a PCE source exists on the Site. However, other sources of CVOCs on the FARM property could not be eliminated.

In 2012, the Region 1 Emergency Planning and Response Branch requested assistance from the EPA Environmental Response Team (ERT) to assist with the delineation of the PCE source area on the Site, and to determine if other PCE sources exist on the FARM property.

1.1 Objectives

ERT requested Scientific, Engineering, Response and Analytical Services (SERAS) contract personnel to assist with the following tasks:

- Delineate the PCE source at the site
- Determine if there are secondary PCE or other CVOC sources on FARM property
- Sample groundwater and monitor groundwater levels in existing wells
- Integrate site data into a preliminary conceptual site model (CSM)

2.0 SITE CHARACTERISTICS

Relief in the site vicinity ranges from 483 to 502 feet above mean sea level (amsl), with the Site at an elevation of approximately 486 feet amsl (Figure 1). The FARM property is about 225 feet south of the Site. The Perley Canal (Canal) is east of the Site and enters the FARM property from the northeast before draining into the River. Sheet piling exists along the Canal and extends about 300 feet west of the Canal along the banks of the River. The depth of the sheet piling and date of installation have not been verified. The River is located about 650 feet south of the Site and flows about a half-mile before entering Lake Winnisquam.

The underlying unconsolidated material in the site vicinity consists of fill (containing varying amounts of coal, ash, brick, and wood), which overlies sand to gravel deposits that are interbedded with silt to clay. Bedrock has not been reached during any of the investigations, but assumed to be the Lower Silurian, Upper Rangeley Formation based on the United States Geological Survey internet map. The Upper Rangeley Formation is characterized as a pelitic schist and quartzite.

Depth to water in the site vicinity ranges from 3½ to 12½ feet below grade. The water table is deepest at the Site and shallows toward the River. In the site vicinity, groundwater flows south toward the River.

3.0 METHODOLOGY

This subsurface investigation was completed in conjunction with an indoor air assessment that was also performed by SERAS personnel under the direction of the ERT and presented in the trip report, *Henry's Dry Cleaners Site, Laconia, New Hampshire, WA#0-176* (SERAS, 2012). This investigation included: membrane interface probe (MIP) soil profiling, targeted soil sampling at a subset of MIP locations, groundwater sampling, monitor well water level gauging, and continuous monitoring of water levels.

3.1 MIP Soil Profiling

Stone Environmental, Inc. (SEI), of Montpelier, Vermont, was subcontracted to complete MIP soil profiling. They used a Geoprobe 6600 track-mounted rig to push the MIP tool. Between March 20 to 27, 2012, the subcontractor logged 30 MIP locations; 16 on the Site and adjoining GWI property, and 14 on the FARM property (Figure 2).

The MIP system utilizes three detectors: an Electron Capture (ECD), Photoionization (PID) and Flame Ionization (FID) detectors. The heated MIP probe is advanced through the subsurface at a rate of one-foot per minute. Organic compounds from the surrounding soil (non-aqueous phase liquid (NAPL), sorbed, dissolved, and gaseous phases) are drawn into the detectors as a gas.

The ECD detects CVOCs and is the most sensitive of the three detectors (i.e., the detector gets saturated at relatively low CVOC concentrations); hence, the ECD is purely qualitative for most applications. The PID detects aromatic volatile organic compounds (VOCs), which includes some CVOCs (e.g., PCE, TCE, c-1,2-DCE and VC) and petroleum hydrocarbon compounds (e.g., benzene, toluene, ethyl-benzene and xylenes). The FID detects only petroleum hydrocarbons (e.g., gasoline, diesel, kerosene and oil). The PID and FID are semi-quantitative as they are not as sensitive as the ECD and therefore, better for source delineation. The MIP cannot identify specific compounds nor can it differentiate between phases (i.e., vapor, dissolved, sorbed or NAPL).

The MIP also measures the electrical conductivity (EC) of soils. Assuming groundwater chemistry for the Site is relatively stable, the EC of unconsolidated sediments increases as grain size decreases (Schulmeister, et. al,, 2003). Consequently, EC responses can be used to reconstruct the local hydrostratigraphy at a high resolution.

Detector responses were displayed continuously in real-time and used to guide the source investigation. Upon completion of each MIP soil profile, the borehole was backfilled with bentonite, certified clean sand, and either an asphalt or topsoil patch. The MIP tools were decontaminated between locations.

3.2 Soil Borings

SEI also completed eight two-inch diameter soil borings between March 27 and 29, 2012. Soil borings were cored at select MIP anomalies to establish some stratigraphic control using either a Geoprobe 6600 track-mounted rig or hollow-stem auger. Depths of the borings ranged from 15 to 47 feet. Soil samples were collected as continuous five-foot intervals and retrieved in two-inch diameter acetate sleeves. The lithology of each core was described and screened in the field for VOCs using a field portable PID.

Soil Sampling and Analyses

Targeted soil samples were collected to determine the upper limits of the organic contaminants. Elevated ECD and PID responses are indicators of CVOC contamination, while elevated FID and PID responses are indicators of petroleum hydrocarbon contamination. The occurrence of coincident, elevated ECD, PID and FID responses in the site vicinity, suggests that CVOC and petroleum hydrocarbon contaminants are co-located in places. Therefore at some locations, soil samples were analyzed only for volatile organic compounds (VOCs), while at others VOCs, total petroleum hydrocarbons (TPH), and semivolatile organic compounds (SVOCs).

Seventy-two soil samples were analyzed in the field by the Region 1 Office of Environmental Measure and Evaluation (OEME) mobile laboratory (mobile laboratory). Confirmation analyses of 10 samples for VOCs and SVOCs were performed at the Region 1 OEME Laboratory (fixed laboratory) in Chelmsford, Massachusetts (MA). Twelve soil samples were analyzed for TPH, or specifically for gasoline, diesel and oil range organic (GRO, DRO and ORO) compounds (Accutest, 2012).

Soil samples were also collected and analyzed for soil physical properties: bulk density, moisture content and total organic carbon content (TOC) (GeoTesting, 2012). Bulk Density and percent moisture content were performed on the same six samples that were collected as one-foot undisturbed one-foot sections in acetate sleeves. Seven samples were analyzed for TOC.

Upon completion of each soil boring, the hole was backfilled with bentonite and certified clean sand, and patched with either asphalt or topsoil.

3.3 Groundwater Investigation

The Region 1 Superfund Technical Assistance and Response (START) contractor performed the groundwater investigation that included collecting 15 groundwater samples from 14 monitoring wells (one duplicate); gauging water levels in 11 monitoring wells; and collecting continuous water level measurements over a five-day period from four of the wells. The groundwater water samples were analyzed for VOCs at both the mobile and fix laboratories, and for SVOCs at the fixed laboratory only.

4.0 RESULTS AND DISCUSSON

4.1 MIP Response

Results from the MIP profiling can be found in the report: *Data Report for Membrane Interface Probe Services, March 20 to 27, 2012, Laconia, New Hampshire, Stone Project ID 12-033-R* (SEI, 2012).

The depths of the MIP soil profiles ranged from 15 to 46 feet, but many profiles met refusal at relatively shallow depths (less than 30 feet). This was especially true for locations on the Site where only three MIP profiles went deeper than 30 feet, M08 (34 feet), M09 (32 feet). Consequently, a number of profiles ended in elevated MIP responses, suggesting contamination extends deeper.

The MIP soil profiling responses are presented as power functions. MIP responses ranged from background up to $10^{7.21}$ microvolts (μV). The baseline, range and mean of the EC probe and ECD, PID and FID detectors were (Table 1):

- EC response ranged from $10^{0.02}$ to $10^{3.20}$ μV, with a mean of $10^{1.30}$ μV.
- ECD response ranged from $10^{4.73}$ to $10^{7.21}$ μV, with a mean of $10^{5.77}$ μV.
- PID response ranged from $10^{3.06}$ to $10^{7.10}$ μV, with a mean of $10^{5.17}$ μV.
- FID response ranged from $10^{2.84}$ to $10^{6.53}$ μV, with a mean of $10^{4.21}$ μV.

The MIP responses were used to generate three dimensional (3D) models using the RockWorks15™ database management and contouring software. The model was discretized on a 6 by 3 by 1 cubic-foot grid and contoured using the "horizontal bias" method. The bias of the contouring ellipsoid was set at 100 feet horizontal to one foot vertical to predict a discrete value for each nodal point. Video clips of the 3D models are attached in Appendix A, and are also displayed in plan sections and/or schematic section lines AA', BB' and CC' (Figure 3).

EC Response

The hydrostratigraphy of the Site was constructed assuming sand-rich zones are represented by EC responses less than (<) $10^{1.40}$ μV, and clay-rich zones greater than (>) $10^{1.40}$ μV. EC responses were correlated to soil boring logs and used to construct transects across the Site vicinity to conceptualize the hydrostratigraphy of the subsurface (Figure 4). Soil boring logs are found in the *Preliminary Assessment/Site Investigation Report for the Henry's Dry Cleaners Site June 2012* (Weston, 2012). The following were inferred for the EC modeling (Figure 4):

- A silty-clay zone separates an upper and lower sandy zone. The upper sand is primarily in the unsaturated zone and the top of the lower sand occurs at 10 to 13 feet below grade (Figure 4).
- The silty-clay zone is thinnest on the Site (less than 2½ feet), but thickens to about 12 feet near the River (Figure 4).
- The silty-clay zone may act as a localized semiconfining unit (i.e., leaky aquitard) in places.

ECD Response

The ECD response was contoured at greater than one-order of magnitude ($10^{5.77}$ μV) above background ($10^{4.73}$ μV). Because of its sensitivity to low CVOC concentration, the measured response of the ECD commonly exceeds the maximum response level ($10^{7.21}$ μV) of the detector. Therefore, the ECD anomaly is a good surrogate of the PCE plume extents, but is not as useful for source delineation. The following can be inferred about the dissolved phase PCE plume:

- The plume is contiguous, extending southward from the HDC building, beneath Buildings #6 and #3 on the FARM property towards the River (Figures 5 and 6).
- The plume has an approximate footprint of 650 by 200 feet (Figure 5).
- The plume is within or beneath the silt-clay layer (Figure 6).
- The plume is near the water table on the Site (MIPs M01 to M04), but 10 to 15 feet below the water table surface (MIPs M17, M18 and 19) near the River indicating the plume dips away from the Site (Figure 6).

PID Response

The PID detector better discriminates between extremes in CVOC concentrations than the ECD. Therefore, where anomalies are coincident, high PID intensities are a better surrogate of a probable CVOC source than the corresponding ECD intensities. The PID response was contoured at greater than one-order of magnitude ($10^{5.17}$ μV) above background ($10^{3.06}$ μV).

This analysis found four PID anomalies (Figure 7), identified as the H1 (Site anomaly) and F1, F2 and F3 anomalies (FARM anomalies). The PID anomalies appear to be within or below the EC anomaly (i.e., silt-clay layer) as depicted in Figure 8 (Schematic Section Lines AA', BB' and CC').

The primary H1 anomaly is on the south side of the HDC building (MIPs M01 through M04). The PID response at the H1 anomaly is two orders of magnitude greater than background, and at least one-order of magnitude greater than the FARM anomalies (Table 1 and Figure 7). Clearly the H1 anomaly coincides with a very strong ECD response, which suggests the response is likely associated with a PCE source area. However, as will be discussed in the following section, the H1 anomaly is also associated with a FID anomaly. This means PCE and petroleum hydrocarbon contaminants are co-located at this anomaly, and the entire PID response cannot be attributable to a PCE source.

The secondary FARM anomalies (F1, F2 and F3) are found between Buildings #3 and #6, and south of Building #8. The FARM anomalies are summarized as follows:

- <u>F1 anomaly</u> (MIP M21) is located near the east end of Building #6, along the eastern margin of the ECD anomaly. The PID anomaly is near the water table (Figure 8, Schematic Section Line BB'). At MIP M21, a dark brown, light non-aqueous phase liquid (LNAPL) coated the Geoprobe rods as they were withdrawn. This anomaly is probably associated with petroleum hydrocarbons.

- <u>F2 anomaly</u> (MIPs M17 and M20) is located on the west side of Building #3. The PID anomaly occurs at a depth greater than 10 feet below the water table surface (Figure 8, Schematic Section Lines BB' and CC'), and coincides with the ECD anomaly (Figure 6,

Schematic Section Lines BB' and CC'). This anomaly is clearly in groundwater and appears to be associated with dissolved phase PCE. However, as discussed in the following section, the F2 anomaly is also associated with a FID anomaly suggesting petroleum hydrocarbon contaminants are also present.

- F3 anomaly (MIP M25) is a located in the parking lot south of Building #8. The elevated PID response is at the water table (Figure 8, Schematic Line Section BB'), and probably not due to PCE (an ECD anomaly is not present).

FID Response

Results of the FID analysis were compared with the coincident PID response, as well. The FID responses were contoured at greater than one-order of magnitude ($10^{4.21}$ µV) above the background ($10^{2.84}$ µV). Results of the FID analysis shows the same four anomalies (H1, F1, F2 and F3) identified by the PID (Figure 9). The FID anomalies appear to occur above and below the silt-clay layer as suggested by the EC anomaly (Figure 10, Schematic Section Lines AA', BB' and CC').

The FID response at the H1 anomaly is two orders of magnitude greater than background, and at least one-order of magnitude greater than the F1, F2 and F3 responses (Table 1 and Figure 9). The H1 anomaly coincides with both the PID and ECD anomalies, suggesting petroleum hydrocarbons and PCE are co-located at the Site.

The FARM anomalies (F1, F2 and F3) are summarized as follows:

- The F1 anomaly (MIP M21) occurs at the water table (Figure 10, Schematic Section Line BB'). This anomaly is associated with petroleum hydrocarbon contaminants.

- The F2 anomaly (MIPs M17 and M20) occurs at greater than 10 feet below the water table (Figure 10, Schematic Section Lines BB' and CC'). This anomaly shows a strong correlation with the PID and ECD anomalies, suggesting that both dissolved phased PCE and petroleum hydrocarbons are present.

- The F3 anomaly (MIP M25 and M27) is much better defined than its coincident PID anomaly, and occurs near the water table (Figure 10, Schematic Section Line BB'). The FID anomaly coincides with a PID anomaly and is probably due to petroleum hydrocarbons only (Figure 8, Schematic Line Section BB').

4.2 Soil Sampling, Analytical Results and Discussion

CVOCs

Analytical results for CVOCs in soils are presented in the *Laboratory Report, Project No. 12030029, VOAs in Soil, High Level Method, Henry's Dry Cleaners – Laconia, New Hampshire* (EPA, 2012a), and summarized as follows (Table 2):

- In general there is very good agreement between analytical results for PCE performed by the OEME mobile and fixed laboratories.
- PCE is the primary contaminant, with field screening (OEME mobile laboratory) concentrations up to 69,700 µg/kg. The highest soil concentrations were found directly behind the HDC building at MIPs M03 and M04 (Table 2 and Figure 2). The maximum concentration was found at 16 to 17 feet below grade (MIP3), or two to three feet below the water table.

- Boring M03A met refusal at a depth of 22 feet in a high PCE concentration (43,300 µg/kg); hence the vertical extent of PCE is unknown.

- Field screening concentrations up to 7,360 µg/kg PCE were identified consistently from the surface to a depth of 46 feet at MIP M16, located directly east of the GWI building (Table 2 and Figure 2). The highest PCE concentrations in M16 were detected at depths greater than 35 feet. Boring M16 (46 feet total depth) ended in contaminated soils (2,650 µg/kg PCE); hence the vertical extent of PCE is unknown.

- Soil PCE concentrations exceeded the NHDES Leaching Based Soil Concentration (LBSC) of 1,810 µg/kg on the Site and not on the FARM property.

- Peak PCE concentrations on the FARM property (858 µg/kg) are two orders of magnitude lower than the Site. The peak PCE concentrations were at M17 and M31 in the F2 anomaly (Table 2 and Figure 2). The peak concentration was located at 20 to 25 feet below grade (M17); or 16 to 20 feet below the surface of the water table.

Threshold PCE Soil Concentration and Evaluation of DNAPL Source

Analytical results are presented in the *Geotechnical Test Report GTX-11673, Henry's Dry Cleaner, Client Project No. WA0-173* (GeoTesting, 2012), and summarized in Table 3. Site specific soil physical properties were measured to enable an accurate calculation of the PCE threshold concentration (C^T_{PCE}). The C^T_{PCE} is the soil concentration, above which dense non-aqueous phase liquid (DNAP can assume to be present. The C^T_{PCE} is calculated as follows:

$$C^T_{PCE} = (S/\rho_{bulk}) \times [(K_{oc} \times F_{OC} \times \rho_{bulk}) + \eta_w + (H_d \times \eta_a)]$$

where S = PCE solubility (150,000 µg/L), ρ_{bulk} = mean bulk density (Table 3), K_{oc} = PCE organic carbon-water partition coefficient (665 milliliters per gram, assumed), F_{OC} = mean soil organic carbon fraction (Table 3), H_d = dimensionless PCE Henry's Law Constant (0.752, assumed), η_w = water filled pore space (mean moisture content (Table 3)), η_a = air filled pore space (mean total soil porosity (Table 3) minus mean moisture content). The total porosity is estimated from the measured soil bulk density.

The site specific C^T_{PCE} is estimated to be 61,566 µg/kg. The likelihood of DNAPL at the Site can be deduced by observing the departure of the C_{PCE}/C^T_{PCE} ratio from unity (Kueper and Davies, 2009), where C_{PCE} is the measured PCE concentration in soil (Table 2). The C_{PCE}/C^T_{PCE} ratio is interpreted as follows:

- >> 1; DNAPL is definitely present.
- > 1; DNAPL is highly probable.
- > 0.1 but < 1; DNAPL may be present but could be masked by sampling.
- < 0.1; DNAPL is not present

Given the low C_{PCE}/C^T_{PCE} ratio, DNAPL ,if present, may not be mobile but likely present as a residual in the soil. Residual DNAPL is incapable of moving as a separate phase, but serves as a continuous source of PCE to groundwater through dissolution.

The highest C_{PCE}/C^T_{PCE} ratio is 1.132 (Table 2), located at M03 directly south of the HDC building (Figure 2). This ratio is marginally greater than one and indicates residual DNAPL is likely present. Six samples have a ratio that is: $0.1 < C_{PCE}/C^T_{PCE} < 1.0$. Five of these soils were collected directly south of the HDC building, and the other just east of the GWI building. With a low level of certainty,

a residual DNAPL could be present at these locations. The low C_{PCE}/C^{T}_{PCE} ratios on the Site, relative to the PCE groundwater concentration suggests that at best fringes of the PCE source were investigated; and the bulk of the PCE source is likely beneath the HDC building and probably extends beneath the GWI building. Furthermore, the very low C_{PCE}/C^{T}_{PCE} ratios (< 0.1) on the FARM property indicate a very low likelihood of a PCE source on that particular property.

TPHs

Analytical results for the TPH analysis is presented in the *Results for 12 Soil Samples for GRO, DRO, and ORO, Preliminary Results of Project: Henry's Dry Cleaners WA#0-173* (Accutest, 2012), and summarized in Table 4. All TPH concentrations are below the NHDES Soil Direct Contact Risk Based Concentration (SDCRBC) of 10,000 µg/kg. The highest TPH concentration was found on the FARM property, where LNAPL was visible on Geoprobe rods retrieved from MIP M21. The four petroleum hydrocarbon anomalies appeared to be isolated and unrelated to each other.

Semi-Volatile Organic Compounds

Analytical results for SVOCs in soils are presented in the *Laboratory Report, Project No. 12030029, BNAs in Soils Medium Level, High Level Method, Henry's Dry Cleaners – Laconia, New Hampshire* (EPA, 2012b). Analytical results were below the NHDES LBSC for all targeted compounds and not discussed further in this report.

4.4 Groundwater Flow

Eight wells (MW-101S, MW-101D, MW-102, MW-103, OSW-1, GEO-4, GEO-5 and GEO-6) monitor a narrow hydraulic zone (475 to 489 feet amsl) near the water table surface (Table 5). The remaining three wells (NW-3A, B & C) form a well cluster that monitors three, five-foot zones from 444 to 463 feet amsl (Table 5).

Water level data from eight wells that monitor the hydraulic zone near the water table were used to generate a groundwater contour map (Figure 11). Groundwater appears to flow south from the Site beneath Building #6 (FARM property) and towards the River. The hydraulic gradient between the Site and River is approximately 0.009 foot per foot (Table 5). Well cluster NW-3A, B, & C suggests there is a downward vertical gradient on the FARM property.

4.5 Continuous Water Level Measurements

In Situ Level Loggers 100™ were installed in monitor wells GEO-1, GEO-3, GEO-5 and GEO-6 (Figure 2), and synchronized to collect water levels at five minute intervals. Normalized water level measurements and barometric pressure changes from March 22 to 27, 2012 are shown as a composite hydrograph (Figure 12). Over the period of evaluation the following was observed:

- The River does not impose a major hydraulic stress on the shallow aquifer.
- All four wells show an inverse relation to barometric changes, which is characteristic of unconfined aquifers. Fluctuations in water levels due to barometric pressure were small (0.01 to 0.05 inch).
- Wells GEO-1 and GEO-5 were installed behind the sheet piling and the barometric affects are slightly dampened compared to well GEO-3, which is installed downgradient of the sheet piling. This suggests, the sheet piling impedes the hydraulic connectivity between the shallow aquifer and the River (Figure 12).

4.6 Groundwater Sampling, Analytical Results and Discussion

Analytical results for SVOCs in groundwater are presented in the *Laboratory Reports, Project Nos. 12030016, 12030017 and 12030018, BNAs in Water, Henry's Dry Cleaners – Laconia, New Hampshire* (EPA, 2012c, 2012d and 2012e). Results were below the NHDES Maximum Contaminant Level

(MCL) for all targeted compounds and analytical results for SVOCs groundwater are not discussed further in this report.

Analytical results for VOCs in groundwater are presented in the *Laboratory Reports, Project Nos. 12030016 and 12030017, VOAs in Water, Henry's Dry Cleaners – Laconia, New Hampshire* (EPA, 2012f and 2012g), and summarized in Table 6. Analytical results for the fixed laboratory are discussed below:

- The highest PCE concentration (15,000 µg/L) was found in MW-101D in the shallow subsurface in the HDC parking lot. This concentration (10 percent of the PCE solubility) is ten times the EPA one percent (1%) rule (EPA, 1993), which states a dissolved concentration above 1% the contaminant solubility is an indicator of a DNAPL source.
- Monitoring wells MW-101S/D forms a well pair. The wetted screen intervals of MW-101S/D are separated by five feet, and the screen interval of MW-101S straddles the water table (Table 5). However, the PCE concentration found in MW-101S (70 µg/L) is more than two orders of magnitude less than MW-101D (Table 6). This suggests the well pair is hydraulically downgradient of the source.
- Monitor well MW-103 is located about 100 feet hydraulically upgradient of wells MW-101S/D, and non-detect for CVOCs (Table 6). This suggests that a PCE source exists hydraulically downgradient of MW-103 on the Site.
- For the hydraulic zone near the water table (Table 5, 475 to 485 feet amsl), PCE concentrations decrease hydraulically downgradient of the Site towards the River (Table 5).
- The PCE concentration (11,000 µg/L) in monitor well NW3-C on the FARM property is similar to MW-101D on the Site; however, high PCE concentrations found at both wells are likely contributed from the same source, and do not indicate a separate source on the FARM property for the following reasons. Firstly, well NW-3C is screened at 25 feet below the water table. Secondly, no evidence exists for shallow PCE contamination on the FARM property. Finally, the Site wells are shallow and based on MIP responses the screened intervals do not intersect the highest PCE concentrations.
- PCE is the most abundant CVOC in the groundwater, with TCE, c-1,2-DCE and VC less common, and at much lower concentrations.

5.0 CONCEPTUAL SITE MODEL SUMMARY

- The PCE plume is fed by a source, since it is persistent with groundwater concentration exceeding the 1% rule (EPA, 1993).
- Several converging lines of evidence suggest there is a PCE source at the Site. Firstly, the highest ECD/PID responses, and soil and groundwater concentrations are found at the Site. Secondly, the only C_{PCE}/C^{T}_{PCE} (>1) indicative that DNAPL is present is on the Site. Thirdly, the trend in groundwater concentrations suggests a PCE source is located between monitor wells MW-103 and MW-101S/D at the Site. Finally, very high sub-slab soil gas concentrations were found at the HDC and GWI buildings.
- The C_{PCE}/C^{T}_{PCE} suggests the margins of the source were probably sampled, but the bulk of the source is probably beneath the HDC building and may extend under the GWI building.
- The portion of the PCE source, behind the HDC building, is co-located with a LNAPL source.
- The lines of evidence suggest that a PCE source (or other CVOC source) is not present on the FARM property. Firstly, ECD/PID responses are relatively low, especially in the shallow subsurface. Secondly, PCE and/or derivative CVOC soil concentrations are very low, especially in shallow soils. Thirdly, C_{PCE}/C^{T}_{PCE} ratios are much < 0.1. Finally, sub-slab soil gas concentrations are orders of magnitude lower than peak vapor concentrations beneath the HDC and GWI buildings.

- There are isolated LNAPL sources at the Site and FARM property. The four that were sampled had soil TPH concentrations below the NHDES SDCRBC.
- Groundwater in the unconfined aquifer flows south from the Site toward the River. There is a downward vertical component of flow on the FARM property; and the sheet piling impedes the hydraulic connectivity between shallow groundwater and the River.
- From the Site, a dissolved PCE plume emanates southward, through the FARM property and towards the River, with a downward component of transport consistent with groundwater flow.

6.0 RECOMMENDATION

Additional information is required to improve the CSM and aid in evaluating and selecting an appropriate removal option. It is recommended the next phase of the investigation focus on improving the understanding of the dissolved phase, PCE plume extents, and the lithology and hydraulic properties of the aquifer on the Site and adjoining GWI property. It is recommended that up to three well clusters (three wells per cluster) be installed on the Site and/or GWI property to delineate the vertical and horizontal extents of the dissolved-phase plume near the source. Well borings will be logged for stratigraphic control, and soils sampled to determine the depth of contamination and PCE concentrations in the well screen intervals. The wells will be slug tested to determine hydraulic conductivities. The proposed monitor well locations are shown on Figure 13.

Defining the source will be problematic, if not impractical due to underground utilities, building locations, and the drilling cost required to drill beneath the building where directional angle drilling may be required.

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TABLES

TABLE 1
SUMMARY OF MEMBRANE INTERFACE PROBE RESPONSE
HENRY'S DRY CLEANERS CHLORINATED SOLVENT SITE
LACONIA, NEW HAMPSHIRE
JULY 2012

Membrane Interface Probe (MIP)	COUNT	Range (µV)[1]		Mean (µV)[2]	Remarks
		Minimum	Maximum		
Electrical Conductivity (EC)	886	$10^{0.02}$	$10^{3.20}$	$10^{1.30}$	used to reconstruct the local stratigraphy
Electron Capture Detector (ECD)	869	$10^{4.73}$	$10^{7.21}$	$10^{5.77}$	Figure 5 contoured to mean value for ECD
Photoionization Detector (PID)	869	$10^{3.06}$	$10^{7.1}$	$10^{5.17}$	Figure 7 contoured to mean value for PID
Flame Ionization Detector (FID)	869	$10^{2.84}$	$10^{6.53}$	$10^{4.21}$	Figure 9 contoured to mean value for FID

1. MIP responses were contoured to Log values
2. Mean = Geometric Mean

TABLE 2
SUMMARY OF ANALYTICAL RESULTS FOR CVOCs IN SOILS
HENRY'S DRY CLEANERS CHLORINATED SOLVENT SITE
LACONIA, NEW HAMPSHIRE
JULY 2012

Well	Date Collected	Sample ID	Depth (fbg)	CVOC (µg/kg)								
				PCE		TCE		TCE:PCE		Saturation Index (C_{PCE}/C^T_{PCE})	DNAPL Present
C^T_{PCE} (Saturation Threshold)				**61,566**		---		---			
MIP3	3/29/12	OEME-ML	12 to 13	**385**		15	U	0		0.006	No
		OEME-ML	15 to 16	**10**		10	U	0		0	No
		JB3137-1	16 to 17	**69,700**		500	U	0		**1.132**	**Yes**
		OEME-ML	18 to 19	**49,200**		150	U	0		**0.799**	**Maybe**
		JB3137-2	19 to 20	**13,800**		150	U	0		**0.224**	**Maybe**
		OEME-ML	20 to 21	**43,300**		150	U	0		**0.703**	**Maybe**
MIP4	3/29/12	OEME-ML	3 to 4	**1,300**		15	U	0		0.021	No
		OEME-ML	8 to 9	**1,630**		15	U	0		0.026	No
		OEME-ML	10 to 11	**31,800**		15	U	0		**0.517**	**Maybe**
		JB3137-3	13 to 14	**501**		15	U	0		0.008	No
		OEME-ML		**95**		**55**		0.579		0.002	No
		OEME-ML		**271**		15	U	0		0.004	No
		OEME-ML		10	U	15	U	0		0	No
		OEME-ML	18 to 19	10	U	15	U	0		0	No
		OEME-ML	23 to 24	**3,990**		**42**		0.011		0.065	No
		OEME-ML	27 to 28	**7**		15	U	0		0	No
		OEME-ML	30 to 31	10	U	15	U	0		0	No
		OEME-ML	34 to 35	10	U	15	U	0		0	No
MIP14	3/29/12	JB3137-4	10 to 15	**1,200**		**13**		0.011		0.019	No
		OEME-ML	15 to 19	**10**		15	U	0		0	No
		OEME-ML	19 to 24	10	U	15	U	0		0	No
MIP16	3/30/12	OEME-ML	2 to 3	**1,480**		15	U	0		0.024	No
		OEME-ML	3 to 4	**110**		15	U	0		0.002	No
		OEME-ML	8 to 9	**1,600**		15	U	0		0.026	No
		OEME-ML	17 to 18	**52**		15	U	0		0.001	No
		OEME-ML	22 to 23	**2,280**		15	U	0		0.037	No
		OEME-ML	23 to 24	**600**		15	U	0		0.010	No
		OEME-ML	24 to 25	**700**		15	U	0		0.011	No
		OEME-ML	25 to 26	**1,090**		15	U	0		0.018	No
		OEME-ML	26 to 27	**980**		15	U	0		0.016	No
		OEME-ML	27 to 28	**844**		15	U	0		0.014	No
		OEME-ML	28 to 29	**2,020**		15	U	0		0.033	No
		OEME-ML	29 to 30	**920**		15	U	0		0.015	No
		OEME-ML	30 to 31	**2,620**		15	U	0		0.043	No
		OEME-ML	31 to 32	**1,730**		15	U	0		0.028	No
		OEME-ML	32 to 33	**2,400**		15	U	0		0.039	No
		OEME-ML	35 to 36	**4,050**		15	U	0		0.066	No
		OEME-ML	36 to 37	**3,220**		15	U	0		0.052	No
		OEME-ML	37 to 38	**4,860**		15	U	0		0.079	No
		OEME-ML	38 to 39	**4,460**		15	U	0		0.072	No
		OEME-ML	39 to 40	**4,490**		15	U	0		0.073	No
		OEME-ML	40 to 41	**7,360**		15	U	0		**0.120**	**Maybe**
		OEME-ML	41 to 42	**5,190**		15	U	0		0.084	No
		OEME-ML	42 to 43	**4,230**		15	U	0		0.069	No
		OEME-ML	43 to 44	**1,930**		15	U	0		0.031	No
		OEME-ML	44 to 45	**2,010**		15	U	0		0.033	No
		OEME-ML	45 to 46	**2,650**		15	U	0		0.043	No
MIP17	3/28/12	OEME-ML	0 to 5	10	U	15	U	0		0	No
		JB3137-5	5 to 10	10	U	10	U	0		0	No
		OEME-ML		10	U	10	U	0		0	No
		OEME-ML	10 to 15	**36**		**19**		0.528		0.001	No
		OEME-ML	15 to 20	**520**		15	U	0		0.008	No
		OEME-ML	20 to 25	**858**		15	U	0		0.014	No
		OEME-ML	25 to 30	**610**		15	U	0		0.010	No
		OEME-ML	30 to 35	**475**		15	U	0		0.008	No
MIP21	3/28/12	JB3137-6	0 to 5	10	U	15	U	0		0	No
		JB3137-7	5 to 10	10	U	15	U	0		0	No
		JB3137-8		10	U	15	U	0		0	No
		OEME-ML	10 to 15	10	U	15	U	0		0	No
MIP24	3/28/12	OEME-ML	0 to 5	10	U	15	U	0		0	No
		JB3137-9	5 to 10	10	U	15	U	0		0	No
		JB3137-10	10 to 15	10	U	15	U	0		0	No
		OEME-ML	15 to 20	10	U	15	U	0		0	No
		OEME-ML	20 to 25	10	U	15	U	0		0	No
MIP30	3/27/12	JB3137-11	0 to 5	**7**		15	U	0		0	No
		OEME-ML	5 to 10	10	U	15	U	0		0	No
		OEME-ML	10 to 15	10	U	15	U	0		0	No
		OEME-ML	15 to 20	10	U	15	U	0		0	No
		OEME-ML	20 to 25	10	U	15	U	0		0	No
MIP31	3/28/12	JB3137-12	0 to 5	10	U	15	U	0		0	No
		OEME-ML	5 to 10	10	U	15	U	0		0	No
		OEME-ML	10 to 15	**82**		15	U	0		0.001	No
		OEME-ML	15 to 18	**216**		15	U	0		0.004	No

VOCs = Volatile Organic Compounds by EPA Method 524.2
U = Under the Reporting Limit, CVOCs = chlorinated volatile organic compounds, µg/kg = micrograms per kilogram
ftg = feet below grade, PCE = tetrachloroethene, TCE = trichloroethene, C_{PCE} = PCE concentration,
C^T_{PCE} = site specific saturation threshold for PCE,

TABLE 3
SOIL PROPERTIES
HENRY'S DRY CLEANERS CHLORINATED SOLVENT SITE
LACONIA, NEW HAMPSHIRE
JULY 2012

LOCATION	DEPTH INTERVAL (fbg)	EASTING (ft)	NORTHING (ft)	BULK DENSITY (g/mL)	POROSITY [-]	MOISTURE CONTENT[1]	F_{OC}
M03	10 to 11	1036087.5	374579.5	---	---	---	0.0016
	19 to 19			1.92	0.27	0.114	---
M04	19 to 24	1036084.1	374584.7	1.83	0.31	0.132	---
	34 to 35			---	---	---	0.0002
	35 to 46			1.59	0.40	0.144	---
M14	20 to 21	1036072.6	374576.1	---		---	0.0003
M16	14 to 14	1036151.9	374510.8	1.75	0.34	0.133	---
	45 to 46			2.03	0.23	0.078	---
M17	15 to 16	1036122.3	374180.2	---		---	0.0007
M24	16 to 17	1035996.3	374176.1	2.35	0.11	0.131	---
	20 to 21			---	---	---	0.0004
M30	18 to 19	1035872.0	374088.2	---	---	---	0.0002
MEAN				**1.83**	**0.31**	**0.13**	**0.0005**
GEOMETRIC MEAN				**1.82**	**0.31**	**0.12**	**0.0004**

1. Fraction of moisture content units are Mass/Mass

ft = feet, fbg = feet below grade, g/mL = grams per milliliter, F_{OC} = fraction organic carbon

[-] = dimensionless number

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR TPH IN SOILS
HENRY'S DRY CLEANERS CHLORINATED SOLVENT SITE
LACONIA, NEW HAMPSHIRE
JULY 2012

Well	Date Collected	Depth Interval (bgs)	TOTAL PETROLEUM HYDROCARBONS (µg/kg)										
			GRO		DRO		ORO		TPH		GRO:TPH	DRO:TPH	ORO:TPH
			NHDES SDCRBC for TPH =						10,000				
MIP3	3/29/12	16 to 17	2.7	U	48.2		0.4	U	48.2		---	1.00	---
		19 to 20	54.3		260		33.1		347		0.16	0.75	0.10
MIP4	3/29/12	13 to 14	837		1,270		0.4	U	2,107		0.40	0.60	---
MIP14	3/29/12	10 to 15	311		1,190		16.3		1,501		0.21	0.79	0.01
MIP17	3/28/12	5 to 10	2.4	U	0.4	U	0.4	U	2.40	U	---	---	---
MIP21	3/28/12	0 to 5	173		3,860		146		4,033		0.04	0.96	0.04
		5 to 10	60.7		373		0.4	U	434		0.14	0.86	---
			2.3	U	121		0.4	U	121		---	1.00	---
MIP24	3/28/12	5 to 10	2.6	U	133		21.4		154		---	0.86	0.14
		10 to 15	2.4	U	0.4	U	0.4	U	2.4	U	---	---	---
MIP30	3/27/12	0 to 5	2.2	U	338		109		447		---	0.76	0.24
SB31	3/28/12	0 to 5	2.0	U	469		2,010		2,479		---	0.19	0.81

TPH = total petroleum hydrocarbons by EPA Method 8015,

NHDES = New Hampshire Department of Environmental Services, SDCRBC = Direct Contact Risk Based Concentration
U = under the reporting limit, GRO = gasoline range organics, DRO = diesel range organics, ORO = oil range organics

TABLE 5
WELL CONSTRUCTION SPECIFICATIONS AND WATER LEVELS
HENRY'S DRY CLEANERS CHLORINATED SOLVENT SITE
LACONIA, NEW HAMPSHIRE
JULY 2012

Well	Easting (ft)	Northing (ft)	Top-of-Casing	Ground Surface	Diameter (inch)	Screen Length (ft)	Depth (ft)	Hydraulic Zone (ft amsl)		27-Feb-12		Water-Bearing Unit[1]
			ft amsl	ft amsl						DTW	ft amsl	
NW-3A	1036110.8	374187.0	487.39	487.71	0.75	5	44.10	444	449	8.65	478.74	medium to crse sand and gravel (M17)
NW-3B					0.75	5	34.70	453	458	3.80	483.59	fn sand grading downward to crse sand and gravel (M17)
NW-3C					0.75	5	29.91	458	463	4.11	483.28	med sand with w/some crse gravel layers (< 1 ft thick) (M17)
GEO-2	1036202.9	374084.8	486.84	487.05	2	10	11.32	476	483	3.86	482.98	poorly sorted fn to crse sand (M30)
GEO-5	1036280.6	374097.8	486.74	486.87	2	10	11.65	475	483	3.77	482.97	poorly sorted fn to crse sand (M30)
GEO-6	1036246.0	374388.5	495.51	495.84	2	10	16.80	479	484	11.31	484.20	med to fine sand (M31)
OSW-1	1036079.1	374466.6	495.49	495.49	2	10	13.90	482	485	10.68	484.81	gravel layer (< 1 ft thick) that fines downward to fn to med sand (M14)
MW-101S	1036084.7	374574.9	498.02	498.63	2	10	17.65	481	485	12.60	485.42	fn to crse sand
MW-101D	1036081.3	374577.3	498.06	498.63	2	5	21.85	477	482	12.65	485.41	med to crse sand and gravel layer
MW-102	1036055.7	374551.4	497.76	498.17	2	5	17.70	480	485	12.70	485.06	med to crse sand and gravel w/ interbedded of silt to fn sand (1½ ft thick)
MW-103	1036145.7	374708.8	501.38	501.79	2	5	17.60	484	489	12.65	488.73	upgradient well

ft = feet, ft amsl = feet above mean sea level, DTW = Depth in feet to water from top-of-casing
1. Water bearing units are approximated from the nearest the soil boring (Weston, 2012) to each well.

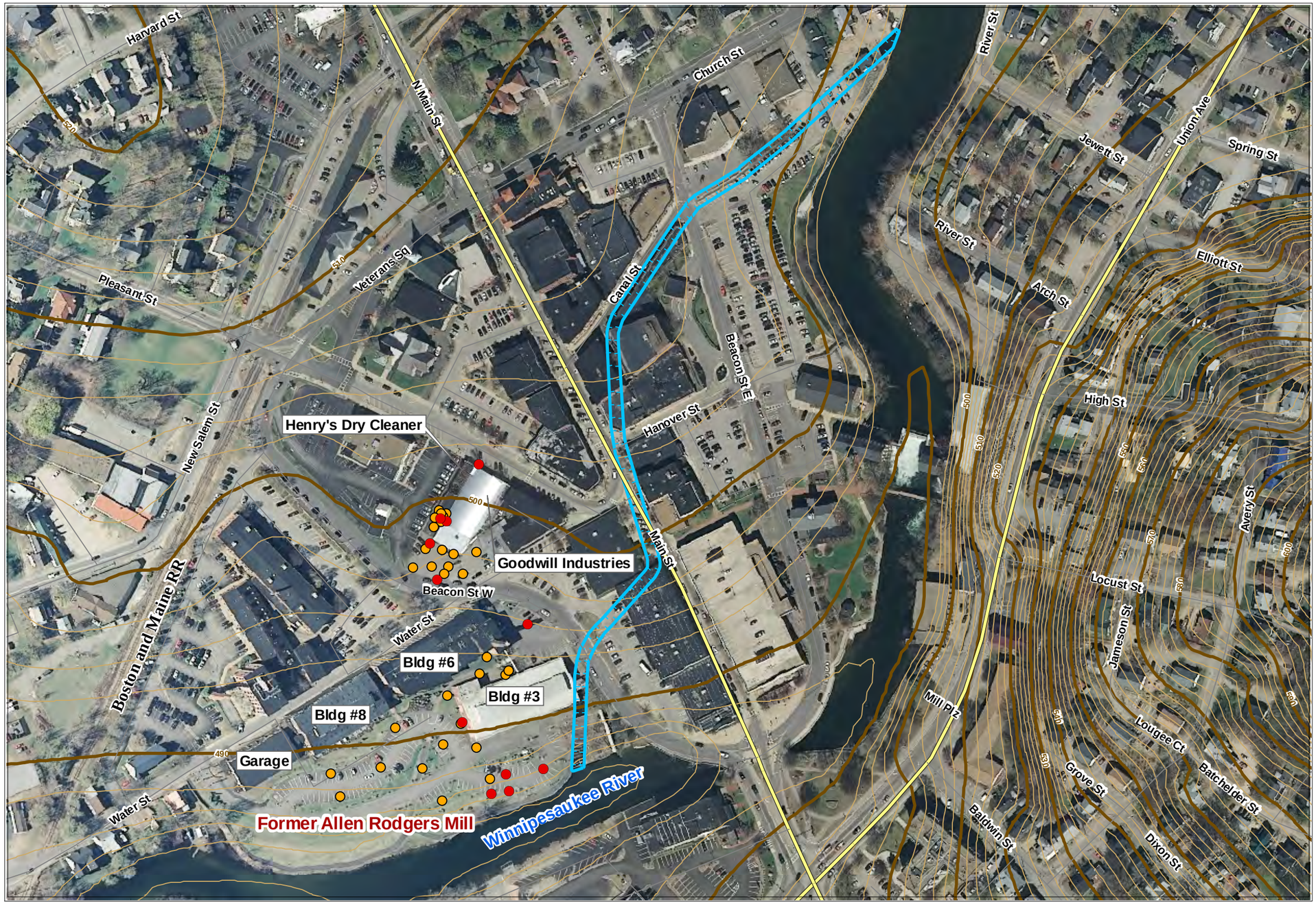
TABLE 6
SUMMARY OF ANALTICAL RESULTS FOR CVOCs IN GROUNDWATER
HENRY'S DRY CLEANERS CHLORINATED SOLVENT SITE
LACONIA, NEW HAMPSHIRE
JULY 2012

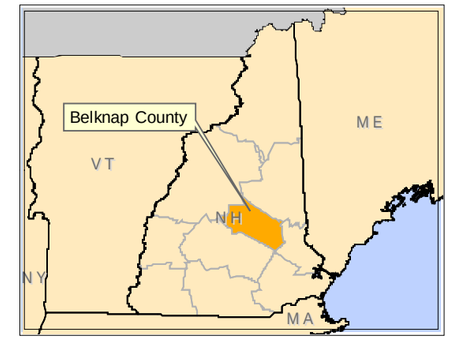
Well	Easting (ft)	Northing (ft)	Sample ID	PCE	TCE	c-1,2-DCE	t-1,2-DCE	Vinyl Chloride	TOTAL CVOCs	PCE:CVOC	Comments
NHDES AGQS				**5**	**5**	**70**	**100**	**2**		---	
NW-3A	1,036,110.8	374,187.0	R01-120314JT-0011	ND	ND	ND	ND	ND	0	0	FARM Site deep
			OEME-ML	ND	ND	---	---	---	0	0	
NW-3B			R01-120314JT-0012	3,700	ND	ND	ND	ND	3,700	1.000	FARM Site intermediate
			OEME-ML	2,904	8.1	---	---	---	2,912	0.997	
NW-3C			R01-120314JT-0013	11,000	ND	ND	ND	ND	11,000	1.000	FARM Site shallow
			OEME-ML	17,510	ND	---	---	---	17,510	1.000	
GEO-1	1,036,202.3	374,050.8	R01-120314JT-0020	70.0	120	220.0	ND	41.0	451	0.155	Winnipesaukee River
			OEME-ML	92.0	130	---	---	---	222	0.414	
GEO-2	1,036,202.9	374,084.8	R01-120314JT-0009	ND	ND	3.2	ND	2.3	5.5	0	Winnipesaukee River
			OEME-ML	ND	ND	---	---	---	0	0	
GEO-3	1,036,158.6	374,026.9	R01-120314JT-0010	ND	9.2	4.2	260	78.0	351	0	Winnipesaukee River
			OEME-ML	ND	9.7	---	---	---	9.7	0	
GEO-4	1036248.9	374073.7	R01-120314JT-0007	150	140	110	ND	63.0	463	0.324	Winnipesaukee River
			OEME-ML	ND	ND	---	---	---	0	0	
GEO-5	1036280.6	374097.8	R01-120314JT-0006	ND	ND	ND	ND	ND	0	0	Winnipesaukee River
			OEME-ML	ND	ND	---	---	---	0	0	
GEO-6	1,036,246.0	374,388.5	R01-120314JT-0014	ND	ND	ND	ND	ND	0	0	Parking Lot East of Building #3
			OEME-ML	ND	ND	---	---	---	0	0	
OSW-1	1,036,079.1	374,466.6	R01-120314JT-0015	6,400	ND	ND	280.0	ND	6,680	0.958	Parking Lot GWI
			OEME-ML	3,900	ND	---	---	---	3,900	1.000	
MW-101S	1,036,084.7	374,574.9	R01-120314JT-0018	70.0	3.4	ND	32.0	ND	105	0.664	HDC site
			OEME-ML	67.0	ND	---	---	---	67	1.000	
MW-101D	1,036,081.3	374,577.3	R01-120314JT-0017	15,000	ND	ND	ND	ND	15,000	1.000	HDC site
			OEME-ML	21,300	ND	---	---	---	21,300	1.000	
MW-102	1,036,055.7	374,551.4	R01-120314JT-0016	420	10	370	ND	ND	800	0.525	HDC site
			R01-120314JT-0020	420	12	380	ND	ND	812	0.517	
			OEME-ML	565	ND	---	---	---	565	1.000	
				694	ND	---	---	---	694	1.000	
MW-103	1,036,145.7	374,708.8	R01-120314JT-0019	ND	ND	ND	ND	ND	0	0	Upgradient Well HDC
			OEME-ML	ND	ND	---	---	---	0	0	

OEME-ML = Region 1 Mobile Laboratory, ND = under the reporting limit, CVOC = total chlorinated volatile organic compound, PCE = tetrachloroethene,

TCE = trichloroethene, t-1,2-DCE = trans-1,2-dichloroethene, c-1,2-DCE = cis-1,2-dichloroethene,

FIGURES





N
W E
S
Magnetic North

Legend

- Existing Well Location
- MIPs Location
- Perley Canal
- Elevation Contour (C.I.= 10 feet)
- Elevation Contour (C.I.= 2 feet)

Map created using 2010 Orthoimagery data from USGS,

Map Creation Date: 24 May 2012

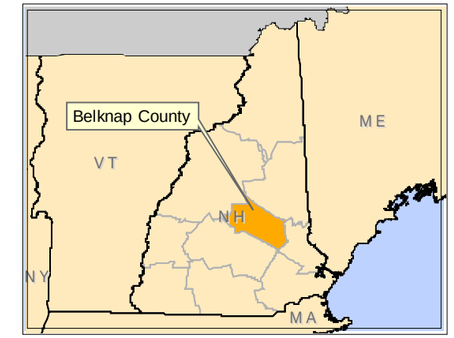
Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

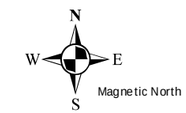
200 0 200
Feet

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry_DryCleaners_Site\173_TM2012_Site_Locations_F1

U.S. EPA Environmental Response Team
Scientific Engineering Response and Analytical Services
EP-W-09-031
W.A.# 0-173

Figure 1
Site Location
Henry's Dry Cleaners Site
Laconia, New Hampshire





Legend

- Well Location
- Soil Boring Location
- MIPs Location

Map created using 2010 Orthoimagery data from USGS,

Map Creation Date: 24 May 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

100 0 100
Feet

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry_DryCleaners_Site\173_TM2012_Sample_Locations_F2

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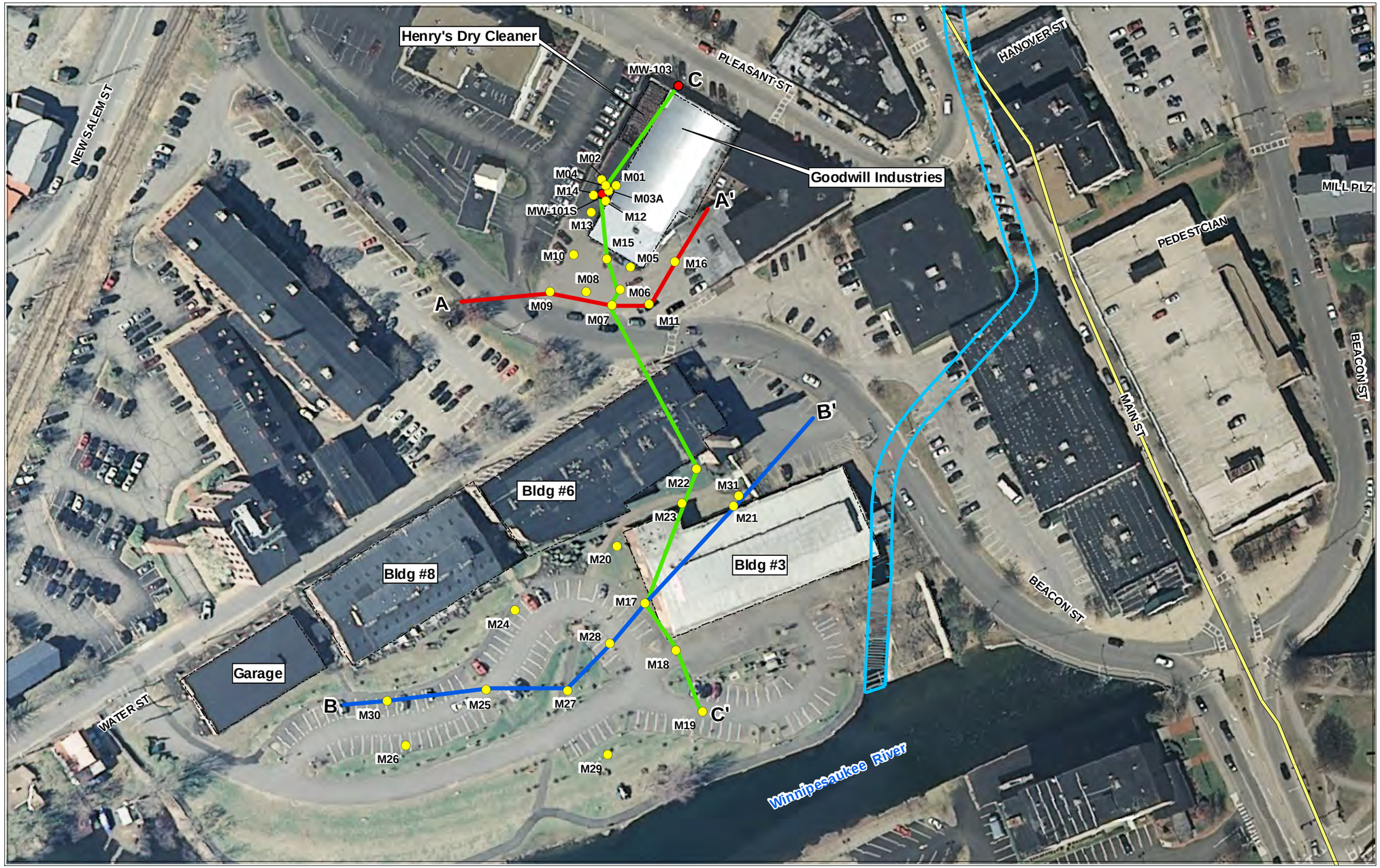
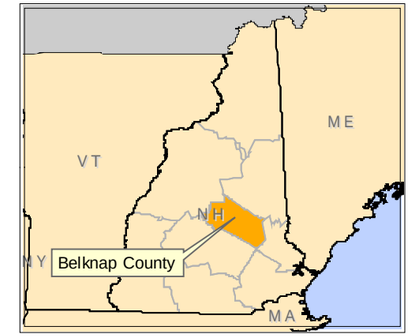
Figure 2
Sample Location
Henry's Dry Cleaners Site
Laconia, New Hampshire





Legend

- MIP Location
- Sample Location
- Line AA'
- Line BB'
- Line CC'
- Perley Canal
- Building

0 100 200 Feet

Map created using 2010 Orthoimagery data from USGS,

Map Creation Date: May 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry_DryCleaners_Site\173_TM2012_Section_Lines_F3

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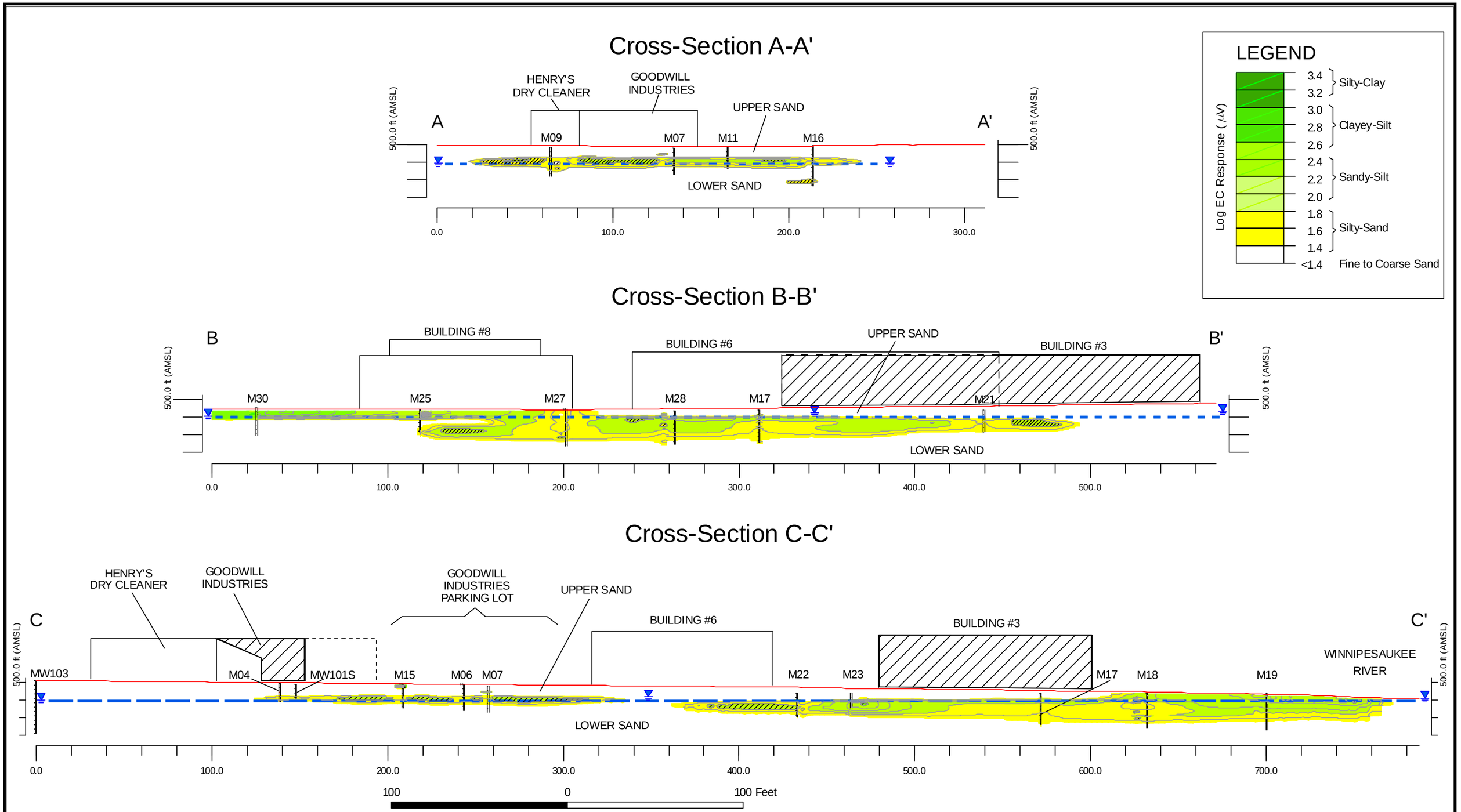
Figure 3
Schematic Section Lines AA', BB' & CC'
Henry's Dry Cleaners Site
Laconia, New Hampshire



Map Creation Date: May 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

Data: g:\arcviewprojects\SERAS01\00-173/cad/May29_2012
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry_DryCleaners_Site\173_TM2012_CrSection_Investigation_EC_F4

LOG EC RESPONSE > 1.4 ($10^{1.4}$ μV) OR SILT TO CLAY-RICH ZONE.

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EP-W-09-031
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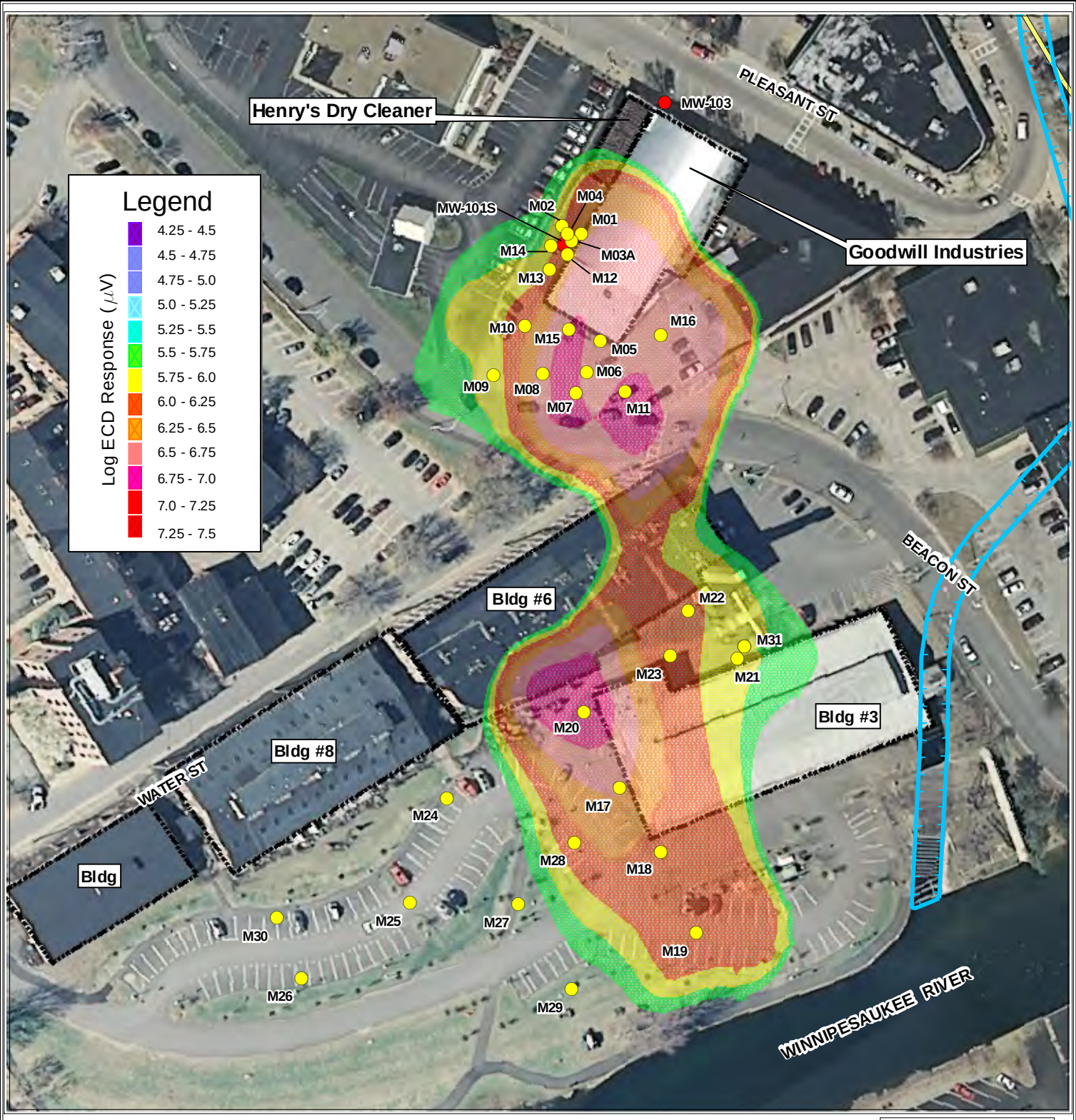
Figure 4
EC Schematic Sections Lines AA', BB' & CC'
Henry's Dry Cleaners Site
Laconia, New Hampshire



Map created using 2010 Orthoimagery data from USGS,

Map Creation Date: May 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

0 100 200 Feet

N W E S

Legend
- MIP Location
- Well Location
- Perley Canal
- Building

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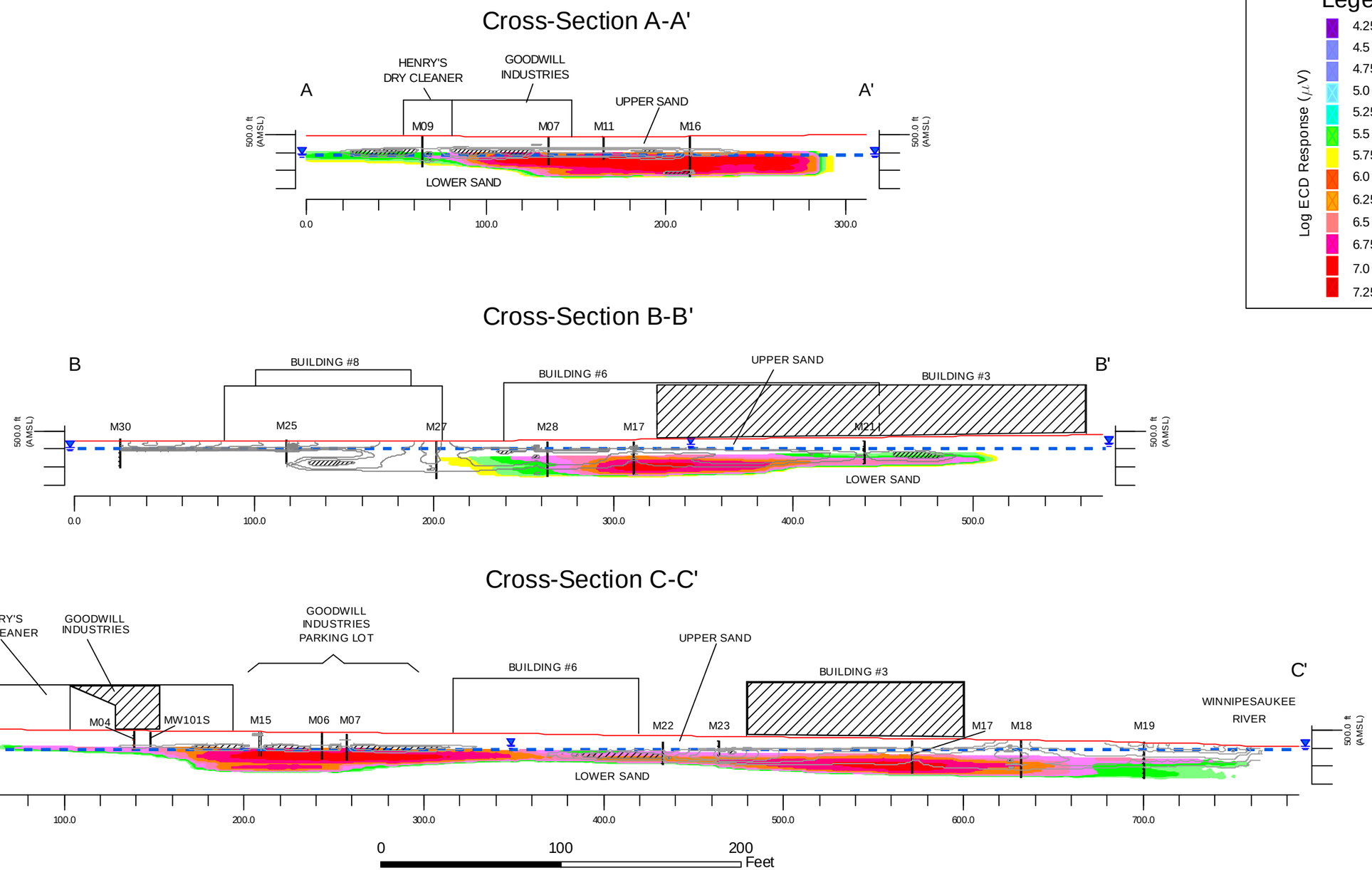
EP-W-09-031
W.A. # 0-173

Figure 5
Plan Section of ECD Response
Henry's Dry Cleaners Site
Laconia, New Hampshire

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry's_DryCleaners\173_TM2012_PlanSect_ECD_F5



Legend

Log ECD Response (μV)

- 4.25 - 4.5
- 4.5 - 4.75
- 4.75 - 5.0
- 5.0 - 5.25
- 5.25 - 5.5
- 5.5 - 5.75
- 5.75 - 6.0
- 6.0 - 6.25
- 6.25 - 6.5
- 6.5 - 6.75
- 6.75 - 7.0
- 7.0 - 7.25
- 7.25 - 7.5

Map Creation Date: May 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

LOG EC RESPONSE > 1.4 ($10^{1.4}$ μV) OR SILT TO CLAY-RICH ZONE.

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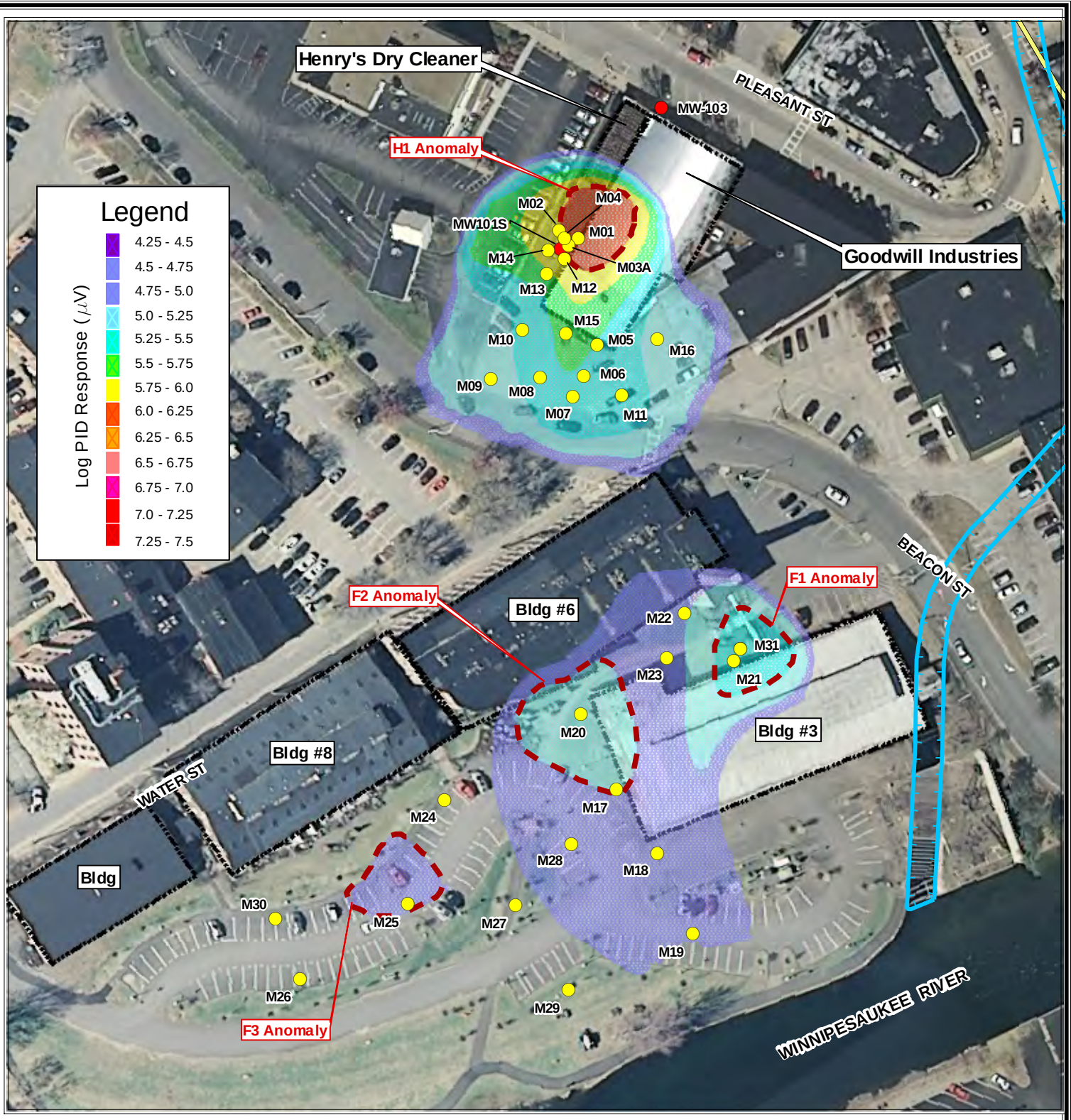
Figure 6
ECD Schematic Section Lines AA', BB' & CC'
Henry's Dry Cleaners Site
Laconia, New Hampshire

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry_DryCleaners_Site\173_TM2012_LineSect_ ECD_F6



0 100 200 Feet

Map created using 2010 Orthoimagery data from USGS,

Map Creation Date: May 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

N
W E
S

Legend

- MIP Location
- Well Location
- Anomalies
- Perley Canal
- Building

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry_DryCleaners_Site\173_TM2012_PlanSect_PID_F7

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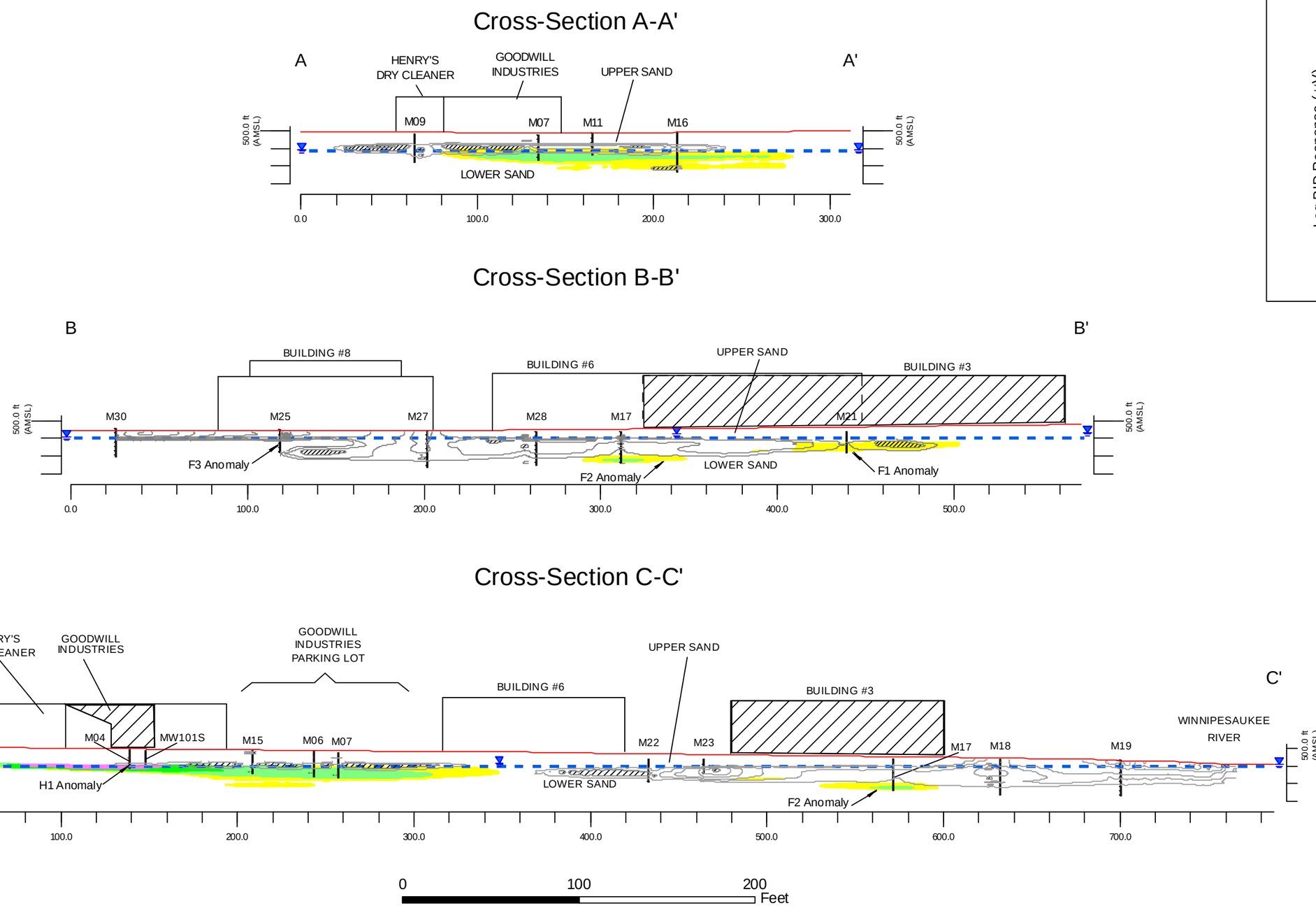
Figure 7
Plan Section of PID Response
Henry's Dry Cleaners Site
Laconia, New Hampshire



Map Creation Date: May 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

LOG EC RESPONSE > 1.4 ($10^{1.4}$ μV) OR SILT TO CLAY-RICH ZONE.

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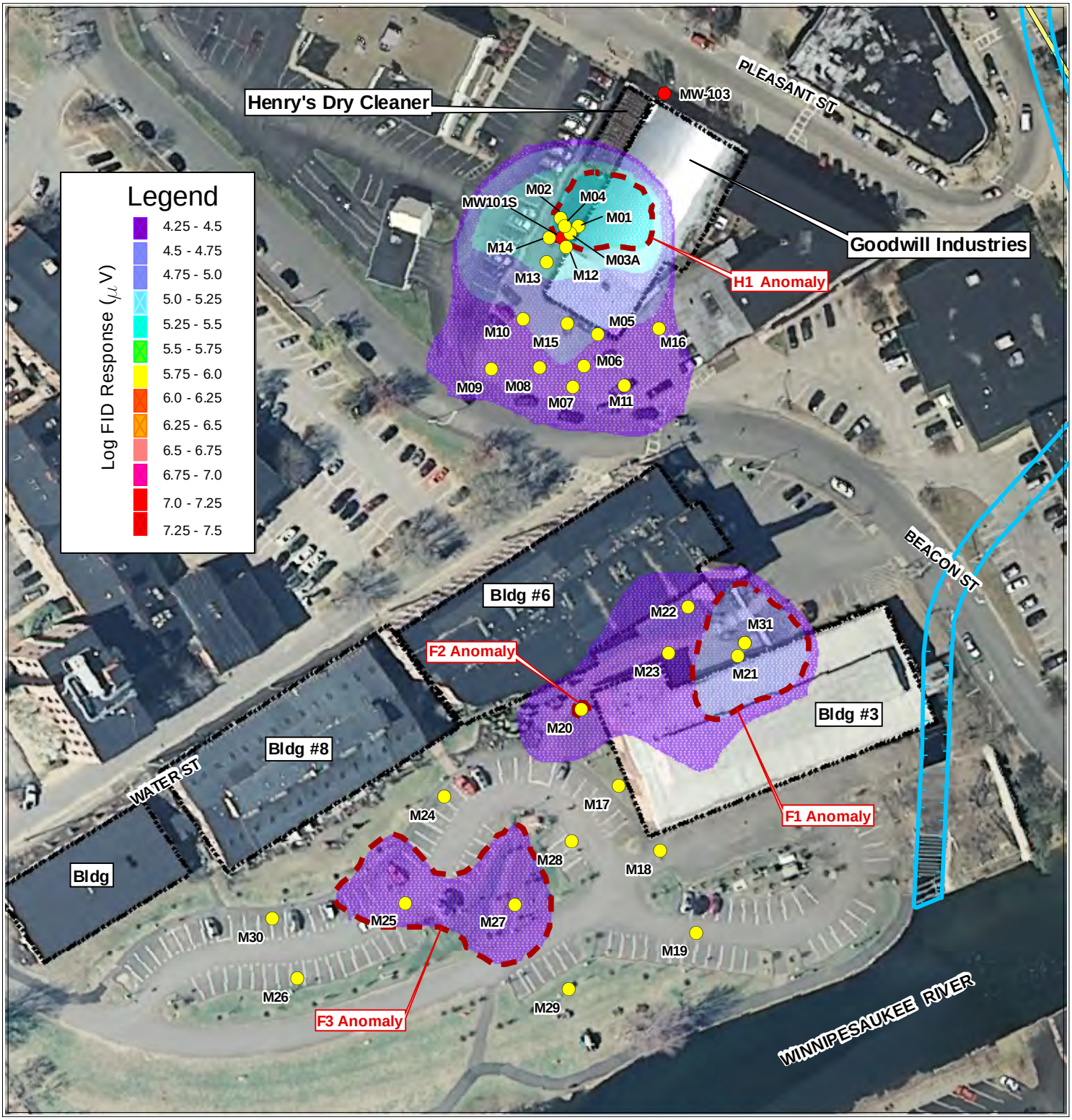
W.A.# 0-173

Figure 8
PID Schematic Section Lines AA', BB' & CC'
Henry's Dry Cleaners Site
Laconia, New Hampshire

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry_DryCleaners_Site\173_TM2012_LineSect_ PID_F8



Map created using 2010 Orthoimagery data from USGS,

Map Creation Date: May 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

0 100 200 Feet

N W E S

Legend

- MIP Location
- Well Location
- Anomalies
- Perley Canal
- Building

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry's_DryCleaners\173_TM2012_PlanSect_FID_F9

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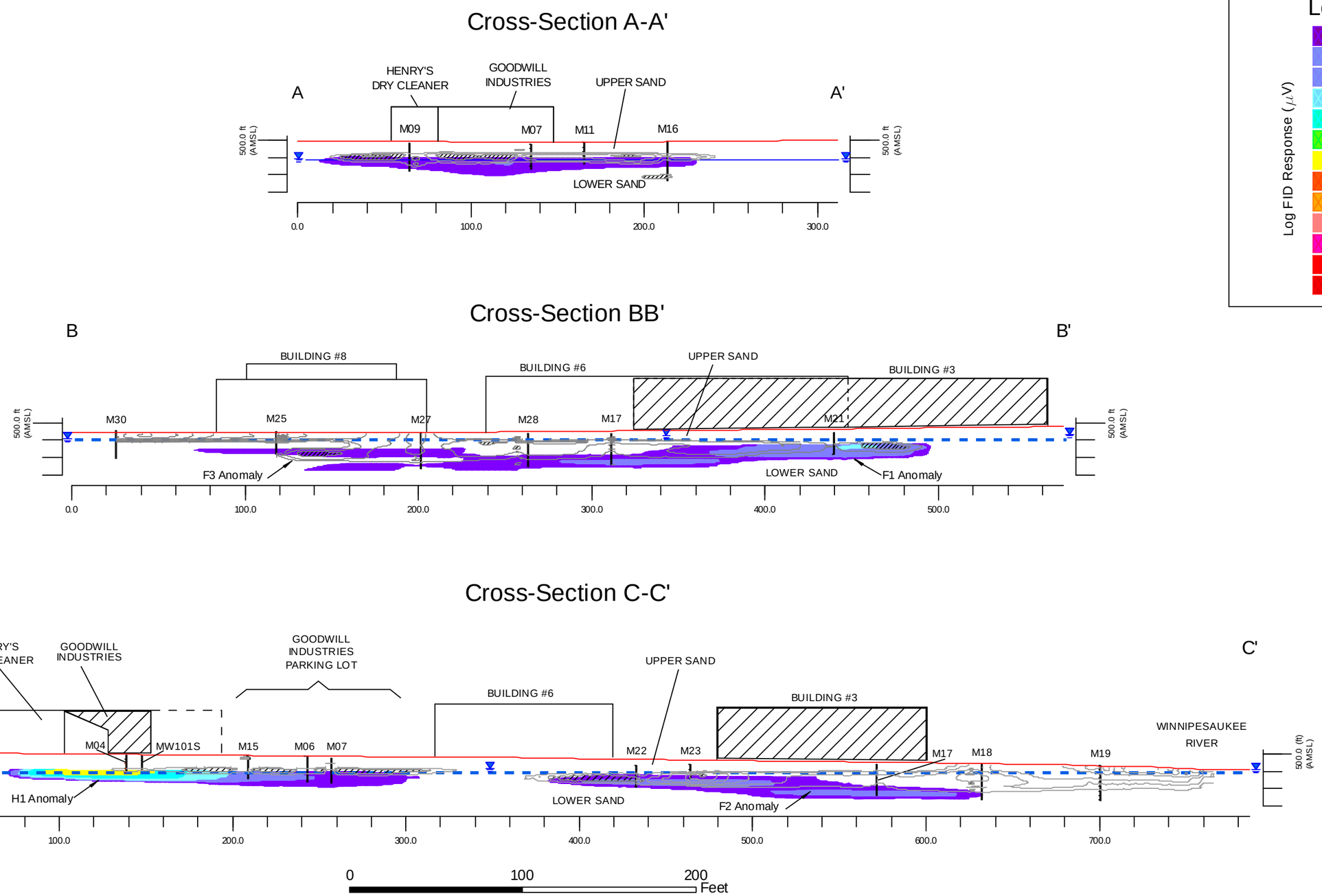
EP-W-09-031
W.A.# 0-173

Figure 9
Plan Section of FID Response
Henry's Dry Cleaners Site
Laconia, New Hampshire



Map Creation Date: May 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

LOG EC RESPONSE > 1.4 ($10^{1.4}$ μV) OR SILT TO CLAY-RICH ZONE.

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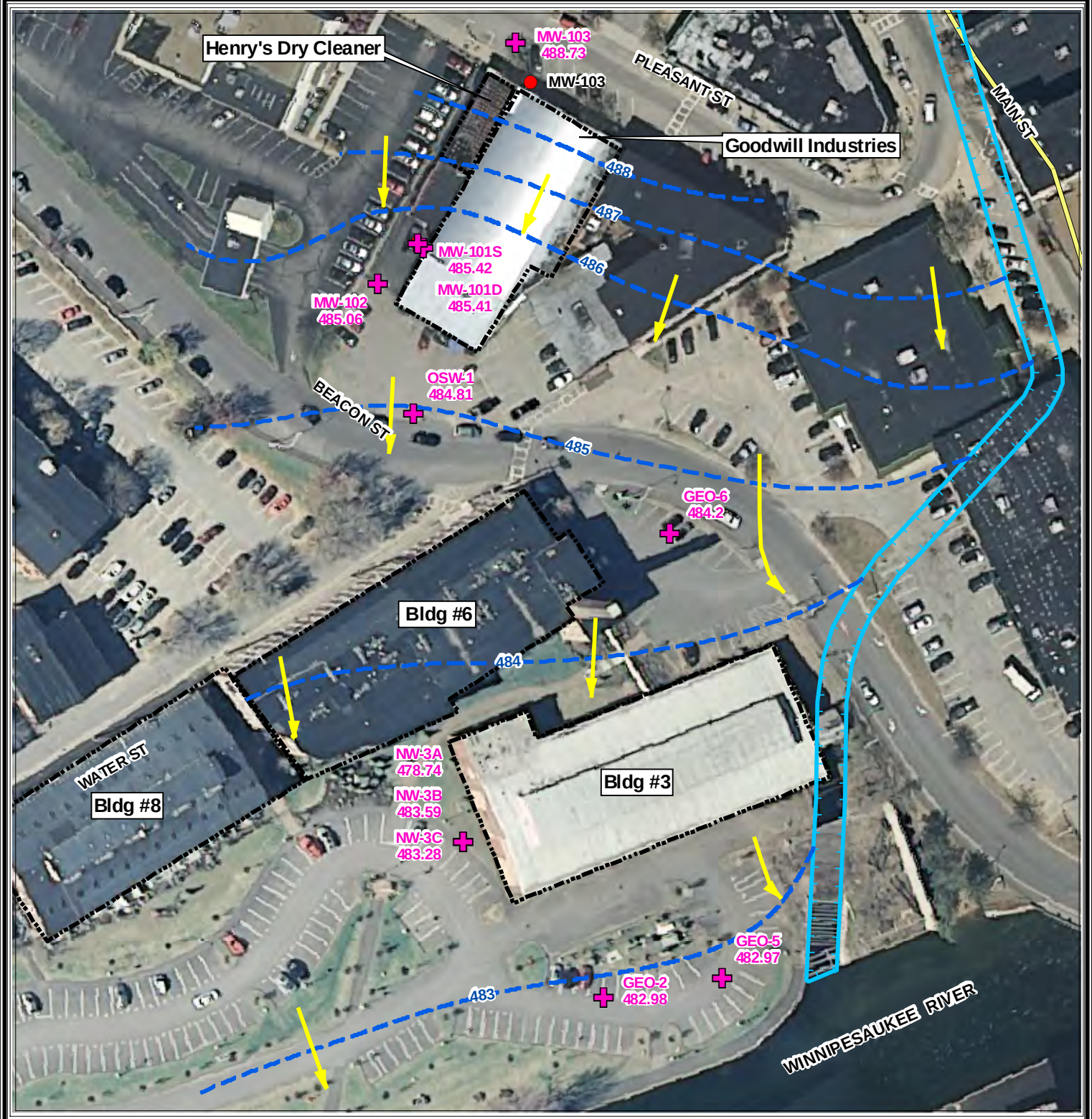
Figure 10
FID Schematic Section Lines AA', BB' & CC'
Henry's Dry Cleaners Site
Laconia, New Hampshire

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry_DryCleaners_Site\173_TM2012_LineSect_ FID_F10



Map created using 2010 Orthoimagery data from USGS,

Map Creation Date: June 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

0 90 180 Feet

N
W E
S

Legend

- Water Level Well Location
- Well Location
- Flow Direction
- Groundwater Contours
- Perley Canal
- Building

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry's_DryCleaners\173_TM2012_Water_Level_F11

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EP-W-09-031
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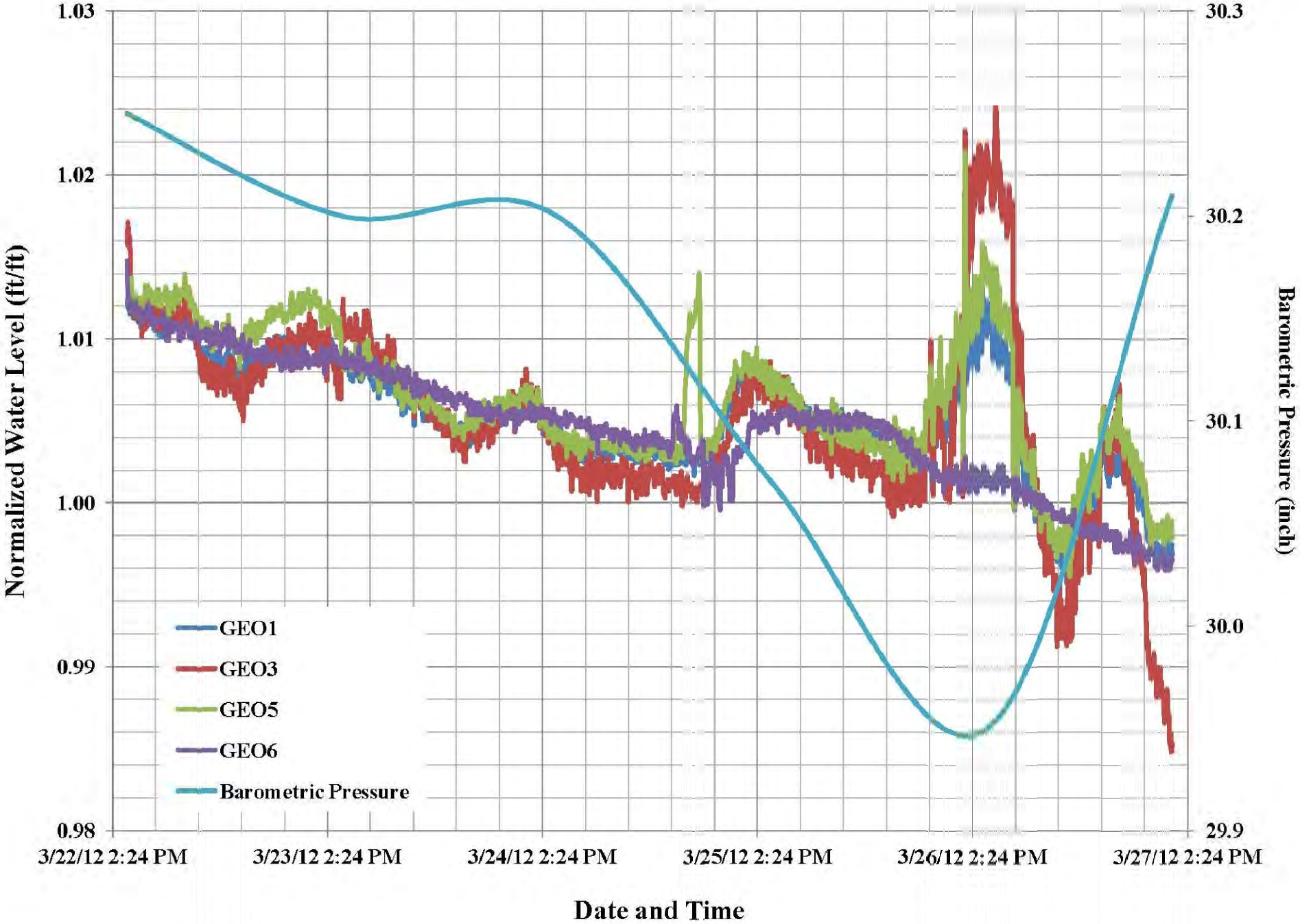
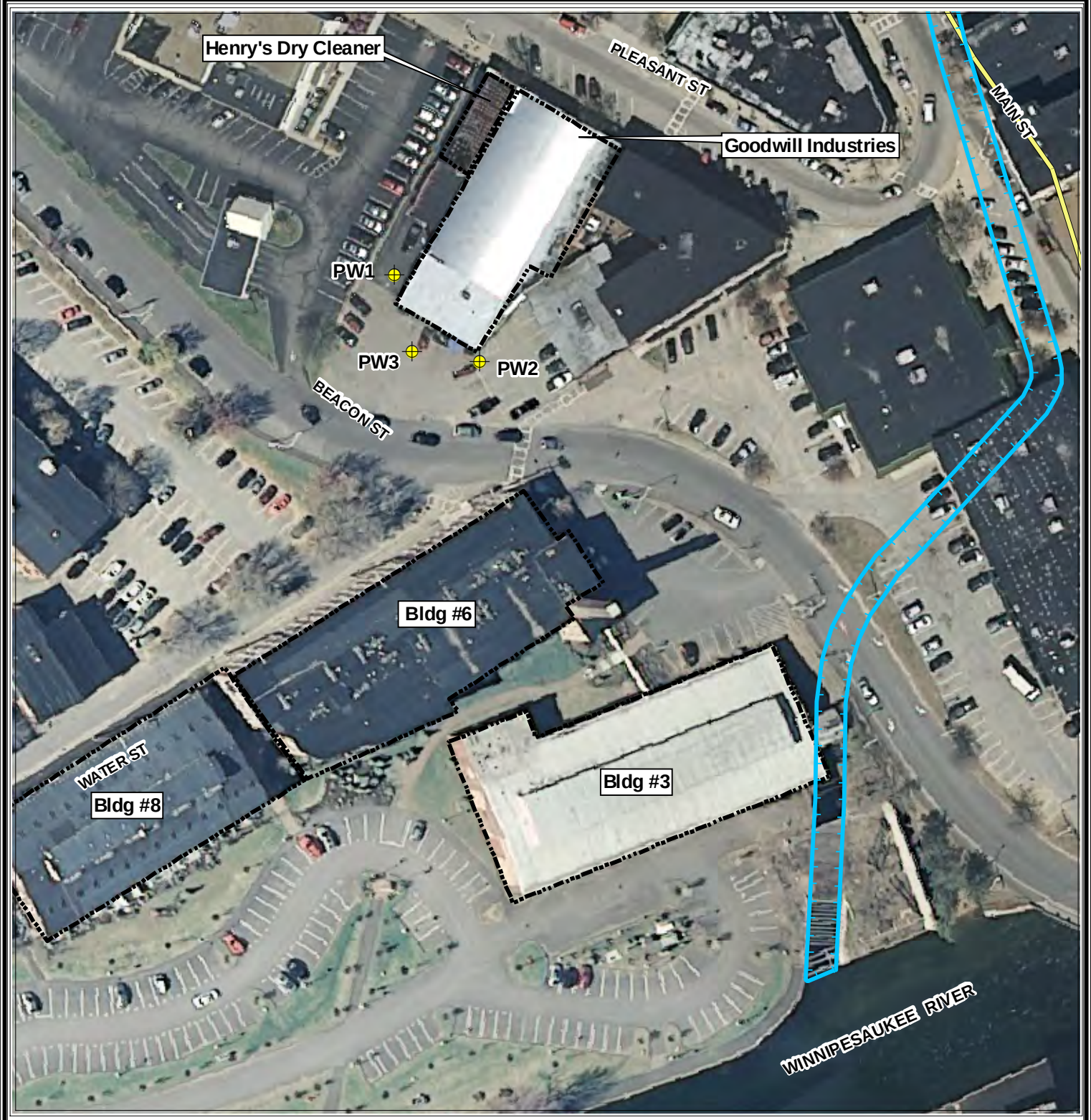
Figure 11
Water Level Contours
Henry's Dry Cleaners Site
Laconia, New Hampshire



U.S. EPA Environmental Response Team
Scientific Engineering Response and Analytical Services
EP-W-09-031
W.A.# 0 -173

Figure 12
Water Level vs. Date and Time
Henry's Dry Cleaners
Laconia, New Hampshire

173/TM2012_HDC_Master.dwg 06/11/12



Map created using 2010 Orthoimagery data from USGS,

Map Creation Date: June 2012

Coordinate system: New Hampshire State Plane
FIPS: 2800
Datum: NAD83
Units: Feet

0 90 180 Feet

N
W E
S

Legend

Proposed Location (3 Wells per Location)

Building

Data: g:\arcviewprojects\SERAS01\00-173
MXD file: G:\ArcInfoProjects\SERAS01\SER00173_Henry's_DryCleaners\173_TM2012_Proposed_WellLoc_F13

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Figure 13
Proposed Well Location
Henry's Dry Cleaners Site
Laconia, New Hampshire

Attachment B

Henry's Dry Cleaners Site, Laconia, New Hampshire, SERAS Work Assignment No. 0-167 – TRIP REPORT

Lockheed Martin
Scientific Engineering Response and Analytical Services
2890 Woodbridge Ave, Building 209
Edison, NJ 08837-3679
Telephone: 732-321-4200 Facsimile: 732-494-4021

LOCKHEED MARTIN

DATE: 29 May 2012

TO: David B. Mickunas, U.S. EPA/ERT Work Assignment Manager

THROUGH: Dennis A. Miller, SERAS Program Manager

FROM: Scott J. Thompson, SERAS Task Leader 5/29/12

SUBJECT: Henry's Dry Cleaners Site, Laconia, Hew Hampshire
Work Assignment #0-167 – TRIP REPORT

1.0 BACKGROUND

The Environmental Protection Agency/Environmental Response Team (EPA/ERT) issued Work Assignment (WA) SERAS-167, Henry's Dry Cleaners Site (Site) in Laconia, New Hampshire (NH) to Lockheed Martin under the Scientific, Engineering, Response, and Analytical Services (SERAS) contract. The purpose of this WA was to assist EPA Region I during the performance of a vapor intrusion study. The study was conducted at residential units and commercial properties adjacent to the Site. The study will assist in determining the extent of the subsurface plume and evaluating the potential impact to indoor air quality associated with the subsurface plume.

Henry's Dry Cleaners is located at 36 Pleasant Street in Laconia, NH. The 0.1-acre lot is occupied by a 2,398 square-foot (ft^2) one-story building constructed in 1946. Henry's Dry Cleaners is bordered by Pleasant Street to the north, a property occupied by the Goodwill Industries building to the south and east, and the Laconia Savings Bank property to the west. The southern portion of the building is constructed on a concrete slab foundation and the northern portion of the building is constructed over a full basement.

The 0.1-acre lot also has an asphalt paved driveway and parking areas. The 0.1-acre lot is currently owned by Ms. Smith who also operates Henry's Dry Cleaners. EPA and New Hampshire Department of Environmental Services (NHDES) conducted a site reconnaissance on October 06, 2011, and interviewed the owner and her daughter and conducted a tour of the facility. The customer service counter and clean clothing rack area are located in the northern portion of the building and the dry cleaning machine and hazardous waste storage area are located in the southern portion of the building.

Dry cleaning operations are conducted on the first floor and a fur storage room is located in the basement. The floor around the base of the dry cleaning machine was observed to be unsealed concrete slab. Small containers of spot cleaning chemicals were stored in a refrigerator in the same room as the dry cleaning machine. A pronounced chemical odor was noted when the refrigerator door was opened and the photoionization detector (PID) reading jumped to 30 parts per million (ppm). A functional air compressor, a non-operating air compressor, a water heater, and the building's only floor drain were located in the old boiler room.

Pipe wrappings, possibly asbestos containing materials (ACM) were noted in the boiler room. A 275-gallon heating oil tank is located along the south wall inside the building. On-site monitoring wells were observed. The Goodwill Industries building is located next to Henry's Dry Cleaners. EPA and NHDES conducted a walkthrough of the Goodwill Industries building with the manager and performed continuous air monitoring with a PID, no readings were observed above background. The reconnaissance proceeded to the south side of the former Allen-Rogers Mill Complex (FARM Complex) property and observed buildings, river, canal, and parking lot.

The FARM Complex is located at approximately 71 degrees, 28 minutes and 15 seconds west longitude,

and 43 degrees, 31 minutes and 45 seconds north latitude on the 7.5 minute Laconia Quadrangle, United States Geological Survey (USGS) topographic map dated 1983.

The Winnipesaukee River abuts the FARM Complex to the south. Residential properties abut the FARM Complex to the west. Water Street and renovated mill buildings abut the FARM Complex to the north. A parking lot, Beacon Street, South Main Street, and commercial properties abut the FARM Complex to the east. The FARM Complex property consists of approximately 5.6 acres identified as Map 135, Lot 4 in the City of Laconia in Belknap County. The current owner of record is Chinburg Builders, Inc. of Durham, New Hampshire.

The FARM Complex is comprised of four buildings. Three are multi-story, brick buildings formerly used in wood milling operations. The fourth building, located at the southeast corner of the property, is constructed of wood and appears to be a former storage building. Perley Canal runs underneath this building into the Winnipesaukee River. A majority of the complex is covered by pavement and gravel. The FARM Complex topography is generally level with a slight slope to the south toward the Winnipesaukee River.

The FARM Complex was originally developed in the early 1860s and operated as a rail car manufacturer until the early 1920s. The FARM Complex was used to manufacture wooden boats in the 1920s and was inactive for several years until the early 1930s. Between 1934 and the late 1990s, the FARM Complex was used to manufacture turned wood products.

Several environmental investigations have been conducted at the complex beginning in 1986. A Site Investigation Report prepared by EnviroSense in February 1997 details the work scope, findings, and recommendations of the previous investigations at the FARM Complex.

2.0 MARCH 2012 ACTIVITIES/METHODOLOGY

SERAS personnel mobilized to the Site on 19 March 2012. Upon arrival at the Site, all equipment was prepared for installation of sub-slab soil gas probes and air sampling using Tedlar® bags and SUMMA® canisters. The TAGA mass spectrometer/mass spectrometer (MS/MS) instrument was prepared for indoor air monitoring and mobile monitoring events.

The March 2012 scope of work included the evaluation of sub-slab soil gas, indoor air and outdoor ambient air quality at residential units and commercial properties in the vicinity of the Site.

Activities included the installation of sub-slab soil gas probes, on-site analysis of sub-slab soil gas samples collected using Tedlar® bags, the collection of 24-hour time-weighted indoor air and outdoor air samples using SUMMA® canisters, and the collection of grab samples from the exhaust ports of the sub-slab depressurization system using SUMMA® canisters. The VOCs of interest for sub-slab gas samples collected in Tedlar® bags were tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride (VCL). Additionally, the 24-hour time-weighted indoor air and outdoor air samples collected using SUMMA® canisters had the same target VOC list. However, the grab SUMMA® canister samples from the depressurization sub-slab exhaust port on the roof of Building 6 were analyzed for the above VOCs as well as 52 additional VOCs stated in the US EPA Method TO-15, "*Determination Of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/Mass Spectrometry (GC/MS)*". The VOCs of interest for the TAGA MS/MS indoor air and mobile monitoring events were PCE and TCE.

The sub-slab soil gas samples collected in Tedlar® bags were analyzed on site by the GC/MS in the TAGA Mobile Laboratory. All air samples collected in SUMMA® canisters were shipped to Con-Test for GC/MS analysis. The TAGA indoor air and mobile monitoring events were performed on site using the triple quadrupole instrument in the TAGA Mobile Laboratory.

2.1 Installation of Sub-Slab Soil Gas Probes

On 20 March 2012, SERAS personnel installed 24 sub-slab soil gas probes in residential units and commercial properties at locations designated by the WAM in accordance with SERAS Standard Operating Procedure (SOP) #2082, *Construction and Installation of Permanent Sub-Slab Soil Gas Wells*. Due to a thin sub-slab in a section of the basement of BLDG H, sub-slab soil gas probes were not installed in this section of the basement of this unit. Each sub-slab soil gas probe was installed flush with the basement slab approximately 24 hours prior to sub-slab soil gas sampling and capped with a Teflon® plug, which was removed during the sampling event.

2.2 On-Site Analysis of Sub-Slab Soil Gas Samples Collected using Tedlar® Bags

On 21 March 2012, SERAS personnel collected 24 sub-slab soil gas samples using Tedlar® bags. All sub-slab soil gas samples were documented under Chain of Custody (COC) Records and transported to the TAGA Mobile Laboratory for on-site GC/MS analysis, performed under SERAS SOP#1741, *Field Analysis of VOCs in Gaseous Phase Samples by GC/MSD Loop Injection*. Preliminary results were reported to the WAM within 24 hours of analysis.

Data were validated by the SERAS Advanced Analytical Group and a Final GC/MS Analytical Report issued. The Final GC/MS Analytical Report indicates that the data (i.e., Tedlar® Bag data) is screening in nature. Usability of screening data is evaluated by a peer independent from the person who conducted the analysis. Data qualifiers and reasons for qualification are outlined in the Final GC/MS Analytical Report. The COC records and screening data for sub-slab soil gas samples collected using Tedlar® Bags can be found in the Final GC/MS Analytical Report, SERAS-167-DFA-033012, located in Appendix A.

2.3 Collection and Analysis of Air Samples using SUMMA® Canisters

On 21 March 2012, SERAS personnel started collection of 14 indoor air samples and three (3) outdoor ambient air samples using SUMMA® canisters. Indoor air samples and outdoor ambient air samples collected using SUMMA® canister were equipped with a restrictive orifice set at an approximate flow rate of 3.4 milliliters per minute (mL/min) to collect between four to five liters of air sample during the 24-hour sampling period. On 22 March 2012, after the 24-hour sampling period had elapsed, the indoor air and outdoor ambient air samples in SUMMA® canisters were collected and properly documented in accordance with SERAS SOP #1704, *SUMMA® Canister Sampling*. Additionally, on this date SERAS personnel collected three (3) grab samples from the sub-slab depressurization exhaust ports on the roof of building 6. These samples were collected by opening the SUMMA® canister without a restrictive orifice in line and allowing the pressure in the SUMMA® canisters to reach ambient, which was accomplished in less than a minute. These samples were also properly documented. All air samples collected using SUMMA® canisters and one "Trip Blank" SUMMA® canister were shipped under COC Records to Con-Test Laboratory and analyzed in accordance with EPA Toxic Organic Method TO-15, *Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*. The 24-hour time-weighted SUMMA® samples were analyzed for six target compounds; the grab SUMMA® samples were analyzed for an expanded list of 63 target compounds. The target compound lists for the analyses are located in the Analytical Report, SERAS-167-DAR-041712, located in Appendix B.

SERAS Quality Assurance Group personnel validated the final laboratory data for all air samples collected in SUMMA® canisters and issued an Analytical Report. The Analytical Report indicates that the data (i.e., SUMMA® canisters data) is definitive in nature. Usability of definitive data is evaluated by a group independent from the group who had conducted the analyses. Data qualifiers and reasons for qualification are outlined in the case narrative of the Analytical Report. The COC records and definitive data for indoor air samples, outdoor ambient air samples and grab samples collected using SUMMA® canisters can be found in the Analytical Report, SERAS-167-DAR-041712, located in Appendix B.

2.4 Indoor Air and Mobile Monitoring using the TAGA MS/MS

On 21 March 2012, real-time indoor air monitoring for PCE and TCE was conducted within 13 residential units. On 22 March 2012, real-time mobile monitoring for PCE and TCE was conducted in the vicinity of the Site. All indoor air monitoring and mobile monitoring events were performed by SERAS personnel using the TAGA MS/MS instrument located in TAGA Mobile Laboratory 1693.

All real-time indoor air and mobile monitoring events, screening in nature, were performed in accordance with the draft SERAS SOP #1711, *Trace Atmospheric Gas Analyzer (TAGA) IIe Operations.* During indoor air monitoring, various locations within the confines of each residential or commercial building were monitored, as well as, all floor drains, floor cracks and any wall openings. Description of the actual procedures used for the indoor air and mobile monitoring events can be found in the Final Analytical TAGA Report, SERAS-167-DFA-040312, located in Appendix C.

3.0 MARCH 2012 RESULTS

Tables 1 and 2 summarize the March 2012 Tedlar® bag and SUMMA® canister sampling locations, respectively, at the Henry's Dry Cleaners Site, and indicate the figure depicting each location. Figure 1 presents the locations for the building that were sampled or monitored. Figure 2 through Figure 8 provide the sub-slab soil gas sampling locations. Sub-slab soil gas samples in Tedlar® bag were analyzed on site by SERAS personnel and data were reported within 24 hours. Tables 3 summarizes the results of target VOCs in sub-slab soil gas samples collected using Tedlar® bags in part per billion by volume (ppbv). Figure 9 through Figure 22 provide the SUMMA® canister sampling locations. All indoor air, outdoor ambient air and grab samples collected using SUMMA® canisters were sent to Con-Test Laboratory for EPA TO-15 analysis. Table 4 summarizes the results of target VOCs in air samples collected using SUMMA® canisters in ppbv.

3.1 Tedlar® Bag Results

Of the 24 sub-slab soil gas samples collected using Tedlar® bags on 21 March 2012, sample numbers 51110 (BLDG G-SS-01), 51107 (BLDG H-SS-01) and 51108 (BLDG H-SS-02) have the highest reportable results for tetrachloroethene at 21,000 ppbv, 13,000 ppbv and 4,800 ppbv, respectively. Sample numbers 51110 (BLDG G-SS-01), 51108 (BLDG H-SS-02), 51107 (BLDG H-SS-01) and 51109 (BLDG H-SS-03) have the highest reportable results for trichloroethene at 1,100 ppbv, 81 ppbv, 76 ppbv and 76 ppbv, respectively. Sample numbers 51110 (BLDG G-SS-01), 51109 (BLDG H-SS-03) and 51108 (BLDG H-SS-02) have the highest reportable results for cis-1,2-dichloroethene at 7,700 ppbv, 540 ppbv and 100 ppbv, respectively. Sample numbers 51110 (BLDG G-SS-01), 51109 (BLDG H-SS-03) and 51108 (BLDG H-SS-02) have the highest reportable results for trans-1,2-dichloroethene at 13 ppbv, 6.2 ppbv and 0.90 ppbv, respectively. Sample number 51110 (BLDG G-SS-01) had the only reportable result for 1,1-dichloroethene at 8.4 ppbv. Vinyl chloride was not detected in any sub-slab soil gas samples collected in Tedlar bags on 21 March 2012. The COC records and screening data for sub-slab soil gas samples collected using Tedlar® Bags can be found in the Final GC/MS Analytical Report, SERAS-167-DFA-033012, located in Appendix A.

3.2 SUMMA® Canister Results

Of the 14 indoor air samples collected using SUMMA® canisters on 21-22 March 2012, sample numbers 167-009 (Unit 007-IA2), 167-008 (Unit 007-IA1), and 167-012 (Unit 008-IA1) have the highest reportable results for tetrachloroethene at 0.77 ppbv, 0.75 ppbv and 0.69 ppbv, respectively. Trichloroethene, 1,1-dichloroethene, cis-1,2-dicholoroethene, trans-1,2-dichloroethene and vinyl chloride were not detected above their reporting limits.

Of the three grab samples collected in SUMMA® canisters on 22 March 2012 from the sub-slab depressurization system exhaust ports, sample numbers 167-020 (BLDG 6-Port 1), 167-018 (BLDG 6–Port 3) and 167-019 (BLDG 6-Port 2) have reportable results for tetrachloroethene at 530 ppbv, 92 ppbv and 6.2 ppbv, respectively. Sample numbers 167-020 (BLDG 6-Port 1), 167-018 (BLDG 6–Port 3) and 167-019 (BLDG 6-Port 2) have reportable results for trichloroethene at 22 ppbv, 7.2 ppbv and 0.39 ppbv, respectively. Sample number 167-020 (BLDG 6–Port 1) had a reportable results for 1,1-dichloroethene at 0.37 ppbv. Sample numbers 167-020 (BLDG 6-Port 1), 167-018 (BLDG 6–Port 3) and 167-019 (BLDG 6-Port 2) have reportable results for cis-1,2-dichloroethene at 24 ppbv, 3.3 ppbv and 0.21 ppbv, respectively. Sample numbers 167-020 (BLDG 6-Port 1) and 167-018 (BLDG 6–Port 3) have reportable results for trans-1,2-dichloroethene at 0.37 ppbv and 0.15 ppbv, respectively. Vinyl chloride was not detected about its quantitation limits in any of the grab air samples. Grab samples were analyzed for the full TO-15 list of target compounds. Results for all VOC target compounds for grab samples collected using SUMMA® canisters can be found in the Analytical Report, SERAS-167-DAR-041712, located in Appendix B.

Of the three outdoor ambient air samples collected using SUMMA® canisters on 21-22 March 2012, tetrachloroethene, trichloroethene, 1,1-dichloroethene, cis-1,2-dicholoroethene, trans-1,2-dichloroethene and vinyl chloride were not detected above their reporting limits.

3.3 TAGA Indoor Air and Mobile Monitoring Results

Of the 13 indoor air monitoring events on 21 March 2012, Unit 7 (HEN013) had the highest average concentration for tetrachloroethene at 4.2 ppbv in the bedroom one closet between flags R and S. Unit 8 (HEN016) had the second highest average concentration for tetrachloroethene at 0.82 ppbv in bedroom one between flags Q and R. Unit 6 (HEN004) had the third highest average concentration for tetrachloroethene at 0.34 ppbv in the center of the unit between flags D and E. The average concentration of trichloroethene was not detected above its quantitation limit within any of the units monitored. Results for all indoor ambient air monitoring events can be found in the Final Analytical TAGA Report, SERAS-167-DFA-040312, located in Appendix C.

Figure 23 and Figure 24 provide the mobile monitoring routes. Of the two mobile monitoring events performed on 22 March 2012, mobile monitoring at Henry's Dry Cleaners Site (HEN028 at 13:10:00 UTC) had the highest instantaneous concentrations detected for tetrachloroethene at 9.3 ppbv at 11.979 minutes on Pleasant Street between flags F and G, 10 ppbv at 21.003 minutes on Pleasant Street between flags K and L, and 17 ppbv at 24.197 minutes on Pleasant Street between flags O and P. An instantaneous concentration of trichloroethene was not detected above its quantitation limit during mobile monitoring. Description of the actual procedures used for the mobile monitoring events can be found in the Final Analytical TAGA Report, SERAS-167-DFA-040312, located in Appendix C.

The Tedlar® bag sampling worksheets and the SUMMA® canister sampling worksheets used during the March 2012 sampling events can be found in Appendix D, Field Worksheets.

TABLES

TABLE 1
Summary of March 2012 Tedlar® Bag Sampling Locations
Henry's Dry Cleaners Site
Laconia, NJ
May 2012

Location	Sub Location	Sample #	Media	Sampling Date	Figure #
Method Blank	NA	20120321-MB	Tedlar Bag	3/21/2012	NA
BLDG 6	SS-01	51100	Tedlar Bag	3/21/2012	2
BLDG 6	SS-02	51101	Tedlar Bag	3/21/2012	2
BLDG 6	SS-03	51102	Tedlar Bag	3/21/2012	2
BLDG 6	SS-04	51103	Tedlar Bag	3/21/2012	2
BLDG 8	SS-01	51104	Tedlar Bag	3/21/2012	3
BLDG 8	SS-02	51105	Tedlar Bag	3/21/2012	3
BLDG 8	SS-03	51106	Tedlar Bag	3/21/2012	3
BLDG H	SS-01	51107	Tedlar Bag	3/21/2012	4
BLDG H	SS-02	51108	Tedlar Bag	3/21/2012	4
BLDG H	SS-03	51109	Tedlar Bag	3/21/2012	4
BLDG G	SS-01	51110	Tedlar Bag	3/21/2012	5
BLDG P1	SS-01	51111	Tedlar Bag	3/21/2012	6
BLDG P1	SS-02	51112	Tedlar Bag	3/21/2012	6
BLDG 3	SS-1-01	51113	Tedlar Bag	3/21/2012	7
BLDG 3	SS-1-02	51114	Tedlar Bag	3/21/2012	7
BLDG 3	SS-1-03	51115	Tedlar Bag	3/21/2012	7
BLDG 3	SS-2-01	51116	Tedlar Bag	3/21/2012	7
BLDG 3	SS-2-02	51117	Tedlar Bag	3/21/2012	7
BLDG 3	SS-2-03	51118	Tedlar Bag	3/21/2012	7
BLDG 3	SS-2-04	51119	Tedlar Bag	3/21/2012	7
BLDG P2	SS-01	51120	Tedlar Bag	3/21/2012	8
BLDG P2	SS-02	51121	Tedlar Bag	3/21/2012	8
BLDG P2	SS-03	51122	Tedlar Bag	3/21/2012	8
BLDG P2	SS-04	51123	Tedlar Bag	3/21/2012	8

Sub-slab (SS) soil gas probes were installed approximately 24-hours prior to sampling events.
NA = Not Applicable

TABLE 2
Summary of March 2012 SUMMA® Canister Sampling Locations
Henry's Dry Cleaners Site
Laconia, NJ
May 2012

Location	Sub Location	Sample #	Media	Start Date	Start Time	Stop Date	Stop Time	Figure #	Remarks
Unit006	IA1	167-001	SUMMA	3/21/2012	8:55:00 AM	3/22/2012	8:45:00 AM	9	
Unit002	IA1	167-002	SUMMA	3/21/2012	9:21:00 AM	3/22/2012	8:52:00 AM	10	
Unit003	IA1	167-003	SUMMA	3/21/2012	9:49:00 AM	3/22/2012	9:53:00 AM	11	
Unit005	IA1	167-004	SUMMA	3/21/2012	10:36:00 AM	3/22/2012	10:04:00 AM	12	
Unit005	IA2	167-005	SUMMA	3/21/2012	10:36:00 AM	3/22/2012	10:04:00 AM	12	
Unit004	IA1	167-006	SUMMA	3/21/2012	10:59:00 AM	3/22/2012	10:12:00 AM	13	
Unit001	IA1	167-007	SUMMA	3/21/2012	11:34:00 AM	3/22/2012	11:24:00 AM	14	
Unit007	IA1	167-008	SUMMA	3/21/2012	1:54:00 PM	3/22/2012	1:38:00 PM	15	
Unit007	IA2	167-009	SUMMA	3/21/2012	1:54:00 PM	3/22/2012	1:38:00 PM	15	
Unit010	IA1	167-010	SUMMA	3/21/2012	2:18:00 PM	3/22/2012	2:33:00 PM	16	
Unit009	IA1	167-011	SUMMA	3/21/2012	2:35:00 PM	3/22/2012	2:38:00 PM	17	
Unit008	IA1	167-012	SUMMA	3/21/2012	3:04:00 PM	3/22/2012	2:41:00 PM	18	
Unit011	IA1	167-013	SUMMA	3/21/2012	3:36:00 PM	3/22/2012	3:37:00 PM	19	
Unit012	IA1	167-014	SUMMA	3/21/2012	3:58:00 PM	3/22/2012	3:44:00 PM	20	
AMB001	OA1	167-015	SUMMA	3/21/2012	6:52:00 PM	3/22/2012	5:30:00 PM	22	
AMB001	OA2	167-016	SUMMA	3/21/2012	6:52:00 PM	3/22/2012	5:30:00 PM	22	
AMB002	OA1	167-017	SUMMA	3/21/2012	6:57:00 PM	3/22/2012	5:35:00 PM	22	
BLDG 6	Port 3	167-018	SUMMA	3/22/2012	12:00:00 PM	3/22/2012	12:00:00 PM	21	Full List
BLDG 6	Port 2	167-019	SUMMA	3/22/2012	12:10:00 PM	3/22/2012	12:10:00 PM	21	Full List
BLDG 6	Port 1	167-020	SUMMA	3/22/2012	12:15:00 PM	3/22/2012	12:15:00 PM	21	Full List
Trip Blank	Trip Blank	167-021	SUMMA	3/21/2012	7:00:00 AM	3/22/2012	5:40:00 PM	NA	

IA = Indoor Air OA = Outdoor Air
NA = Not Applicable

TABLE 3
Summary of Results for VOC Analysis of Samples Collected using Tedlar® Bags in ppbv
Henry's Dry Cleaners Site
Laconia, NJ
May 2012

Sample No.	Location	Sub Location	PCE	TCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	VCL	Units
51100	BLDG 6	SS-01	2.6	U	U	U	U	U	ppbv
51101	BLDG 6	SS-02	1.3	U	U	U	U	U	ppbv
51102	BLDG 6	SS-03	280	40	U	14	0.66	U	ppbv
51103	BLDG 6	SS-04	11	U	U	U	U	U	ppbv
51104	BLDG 8	SS-01	11	U	U	U	U	U	ppbv
51105	BLDG 8	SS-02	5.8	U	U	U	U	U	ppbv
51106	BLDG 8	SS-03	11	U	U	U	U	U	ppbv
51107	BLDG H	SS-01	13000	76	U	13	0.71	U	ppbv
51108	BLDG H	SS-02	4800	81	U	100	0.9	U	ppbv
51109	BLDG H	SS-03	870	76	U	540	6.2	U	ppbv
51110	BLDG G	SS-01	21000	1100	8.4	7700	13	U	ppbv
51111	BLDG P1	SS-01	53	U	U	U	U	U	ppbv
51112	BLDG P1	SS-02	330	U	U	U	U	U	ppbv
51113	BLDG 3	SS-1-01	0.6	U	U	U	U	U	ppbv
51114	BLDG 3	SS-1-02	U	U	U	U	U	U	ppbv
51115	BLDG 3	SS-1-03	1.5	U	U	U	U	U	ppbv
51116	BLDG 3	SS-2-01	U	U	U	U	U	U	ppbv
51117	BLDG 3	SS-2-02	U	U	U	U	U	U	ppbv
51118	BLDG 3	SS-2-03	U	U	U	U	U	U	ppbv

VOC = Volatile Organic Compound
PCE = Tetrachloroethene, TCE = Trichloroethene, 1,1-DCE = 1,1-Dichloroethene, cis-1,2-DCE = cis-1,2-Dichloroethene, trans-1,2-DCE = trans-1,2-Dichloroethene, VCL= Vinyl Chloride
Concentrations are given in part per billion by volume (ppbv)
SS = Sub-Slab Soil Gas
U = Not detected above Reporting Limit (RL)

TABLE 3 (continued)
Summary of Results for VOC Analysis of Samples Collected using Tedlar® Bags in ppbv
Henry's Dry Cleaners Site
Laconia, NJ
May 2012

Sample No.	Location	Sub Location	PCE	TCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	VCL	Units
51119	BLDG 3	SS-2-04	U	U	U	U	U	U	ppbv
51120	BLDG P2	SS-01	0.64	U	U	U	U	U	ppbv
51121	BLDG P2	SS-02	2.6	U	U	U	U	U	ppbv
51122	BLDG P2	SS-03	7.8	U	U	U	U	U	ppbv
51123	BLDG P2	SS-04	3.6	U	U	U	U	U	ppbv

VOC = Volatile Organic Compound
PCE = Tetrachloroethene, TCE = Trichloroethene, 1,1-DCE = 1,1-Dichloroethene, cis-1,2-DCE = cis-1,2-Dichloroethene, trans-1,2-DCE = trans-1,2-Dichloroethene, VCL= Vinyl Chloride
Concentrations are given in part per billion by volume (ppbv)
SS = Sub-Slab Soil Gas
U = Not detected above Reporting Limit (RL)

TABLE 4
Summary of Results for VOC Analysis of Samples Collected using SUMMA® Canisters in ppbv
Henry's Dry Cleaners Site
Laconia, NJ
May 2012

Sample No.	Location	Sub Location	PCE	TCE	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	VCL	Units
167-001	Unit006	IA1	0.28	U	U	U	U	U	ppbv
167-002	Unit002	IA1	0.063	U	U	U	U	U	ppbv
167-003	Unit003	IA1	0.094	U	U	U	U	U	ppbv
167-004	Unit005	IA1	0.13	U	U	U	U	U	ppbv
167-005	Unit005	IA2	0.12	U	U	U	U	U	ppbv
167-006	Unit004	IA1	0.14	U	U	U	U	U	ppbv
167-007	Unit001	IA1	0.049	U	U	U	U	U	ppbv
167-008	Unit007	IA1	0.75	U	U	U	U	U	ppbv
167-009	Unit007	IA2	0.77	U	U	U	U	U	ppbv
167-010	Unit010	IA1	0.13	U	U	U	U	U	ppbv
167-011	Unit009	IA1	0.089	U	U	U	U	U	ppbv
167-012	Unit008	IA1	0.69	U	U	U	U	U	ppbv
167-013	Unit011	IA1	0.06	U	U	U	U	U	ppbv
167-014	Unit012	IA1	0.043	U	U	U	U	U	ppbv
167-015	AMB001	OA1	U	U	U	U	U	U	ppbv
167-016	AMB001	OA2	U	U	U	U	U	U	ppbv
167-017	AMB002	OA1	U	U	U	U	U	U	ppbv
167-018	BLDG 6	Port 3	92	7.2	U	3.3	0.15	U	ppbv
167-019	BLDG 6	Port 2	6.2	0.39	U	0.21	U	U	ppbv
167-020	BLDG 6	Port 1	530	22	0.037	24	0.37	U	ppbv
167-021	Trip Blank	Trip Blank	U	U	U	U	U	U	ppbv

VOC = Volatile Organic Compound
PCE = Tetrachloroethene, TCE = Trichloroethene, 1,1-DCE = 1,1-Dichloroethene, cis-1,2-DCE = cis-1,2-Dichloroethene, trans-1,2-DCE = trans-1,2-Dichloroethene, VCL= Vinyl Chloride
Concentrations are given in part per billion by volume (ppbv)
SS = Sub-Slab Soil Gas AMB = Ambient IA = Indoor Air OA = Outdoor Air
U = Not detected above Reporting Limit (RL)

FIGURES

Figure 1: Locations of Buildings that were sampled or monitored

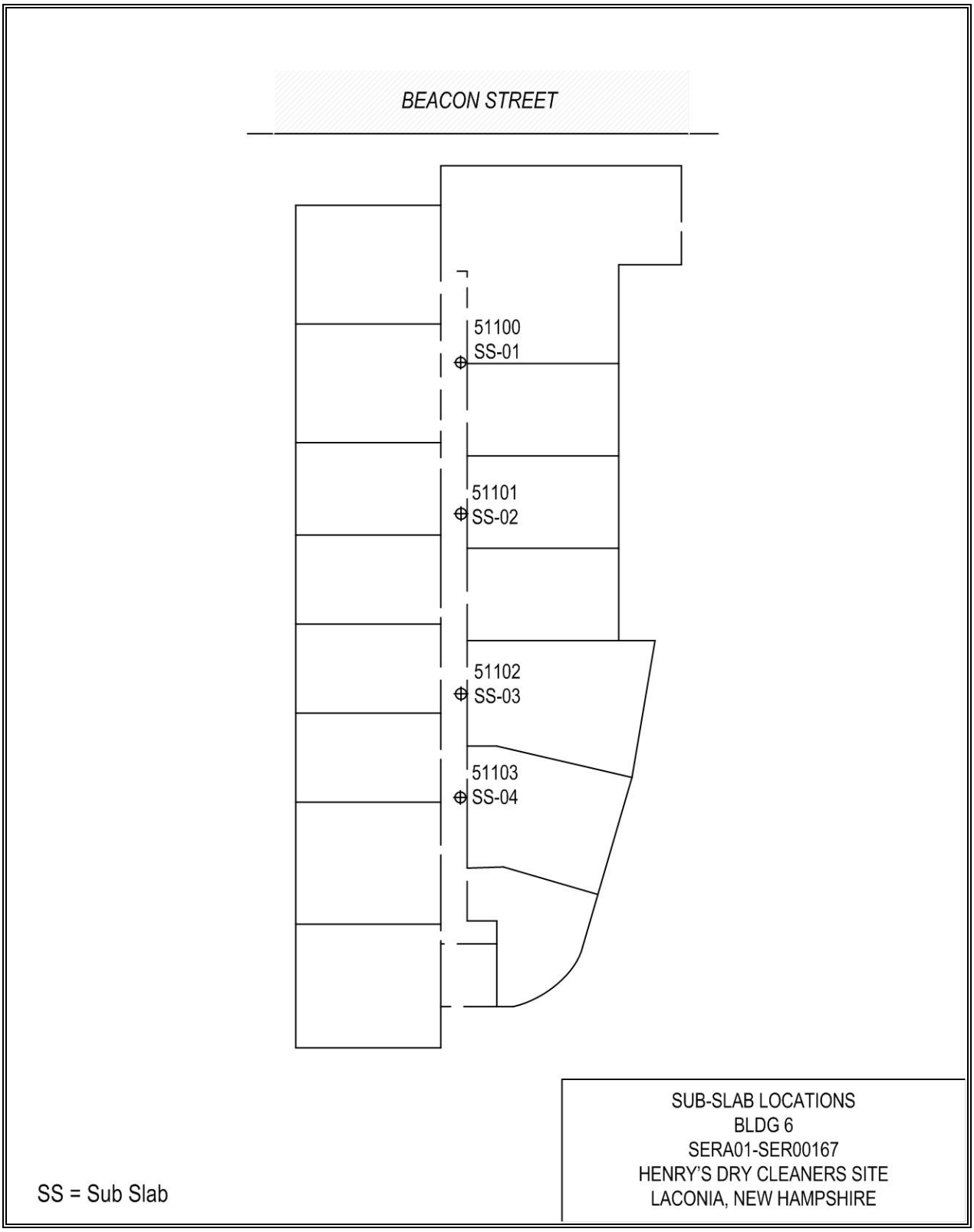


Figure 2: Sub-Slab Locations for BLDG 6

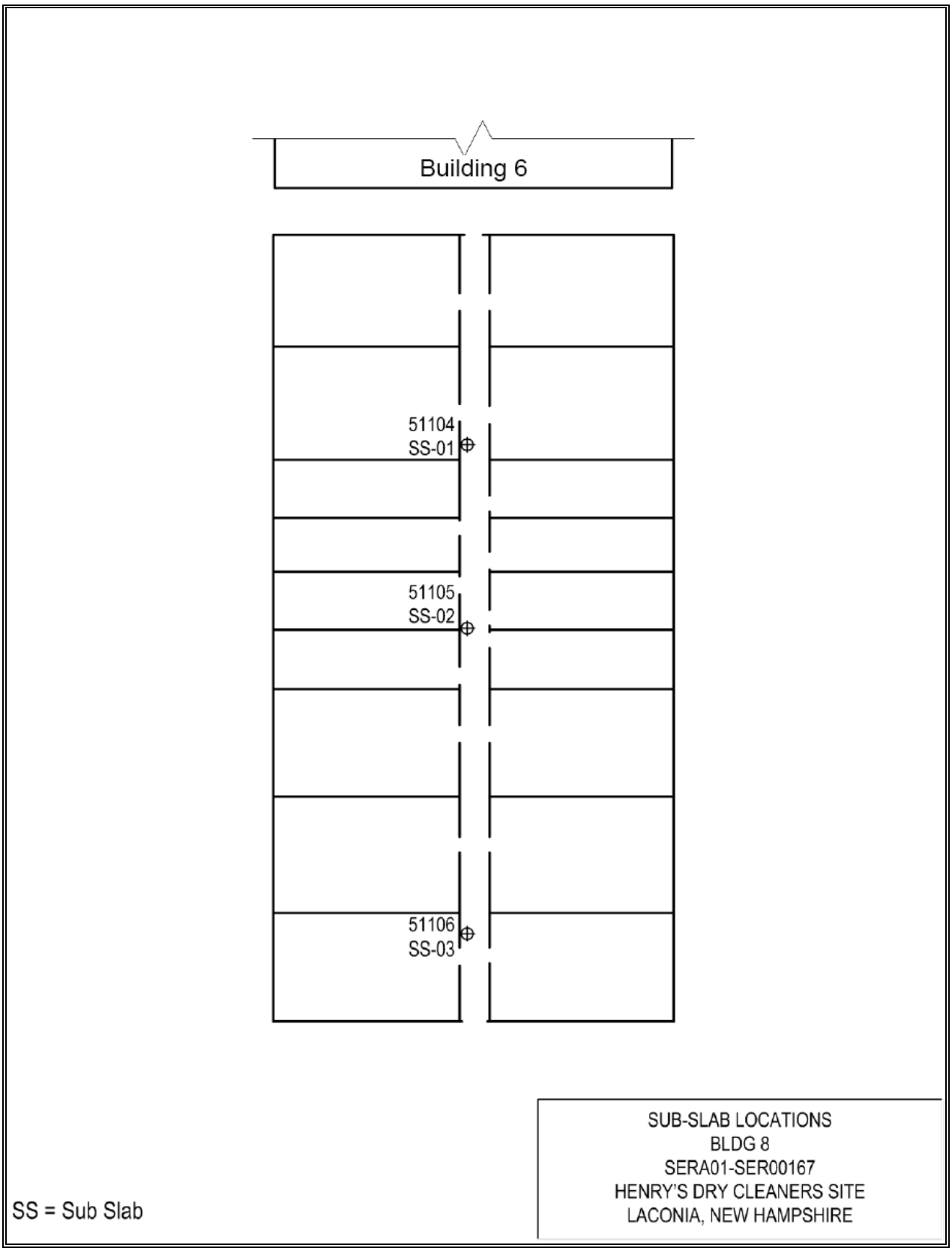


Figure 3: Sub-Slab Locations for BLDG 8

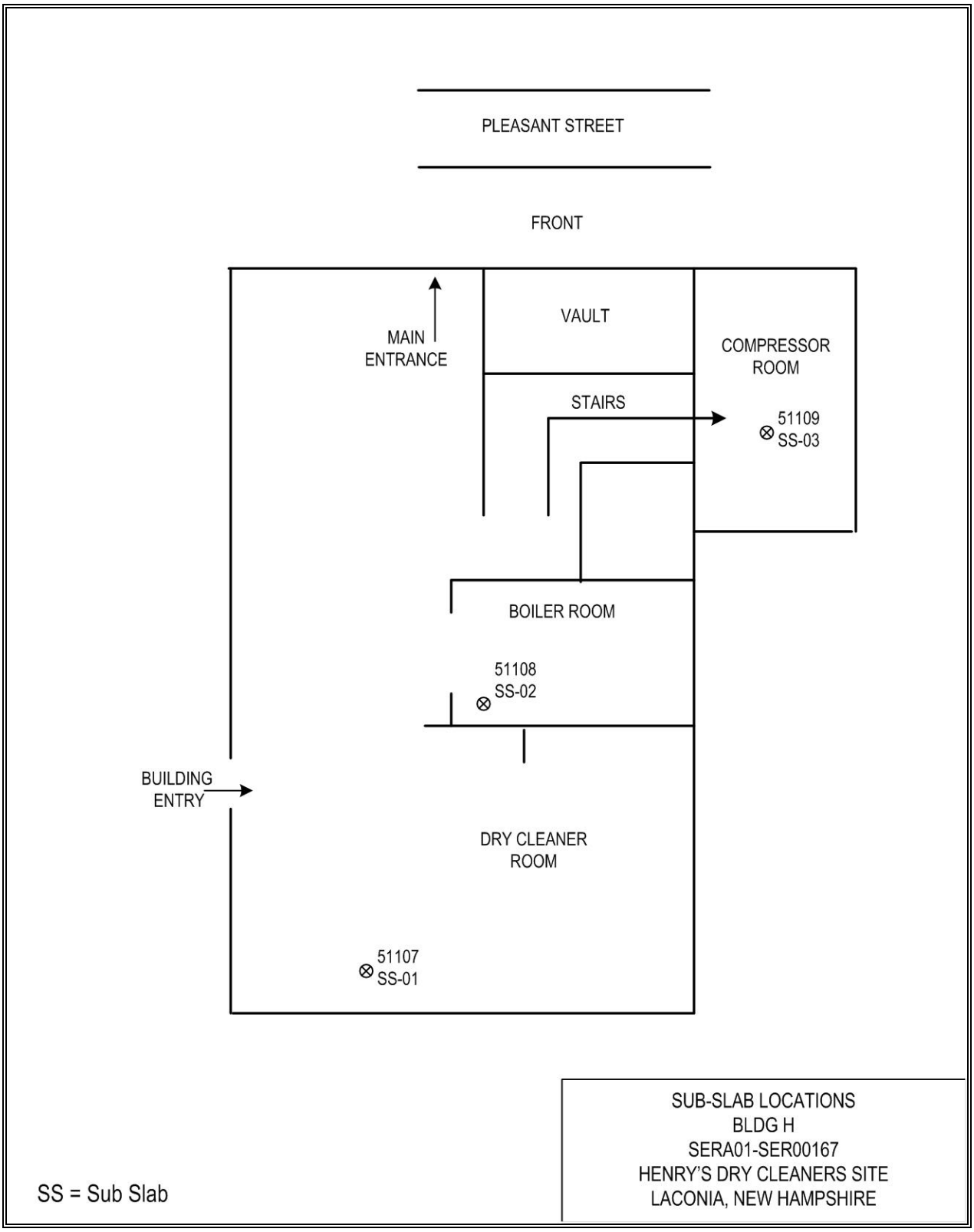


Figure 4: Sub-Slab Locations for BLDG H

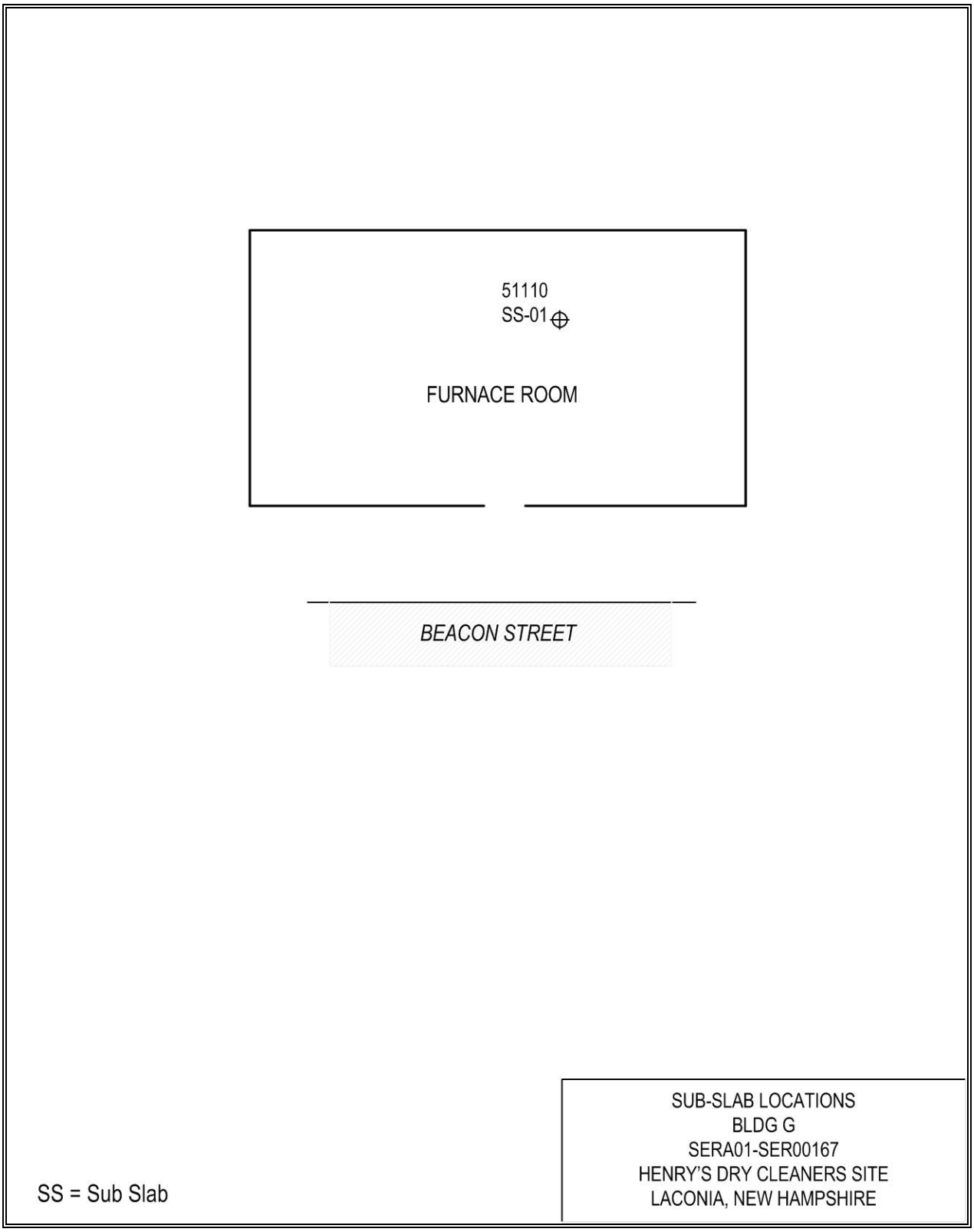


Figure 5: Sub-Slab Locations for BLDG G

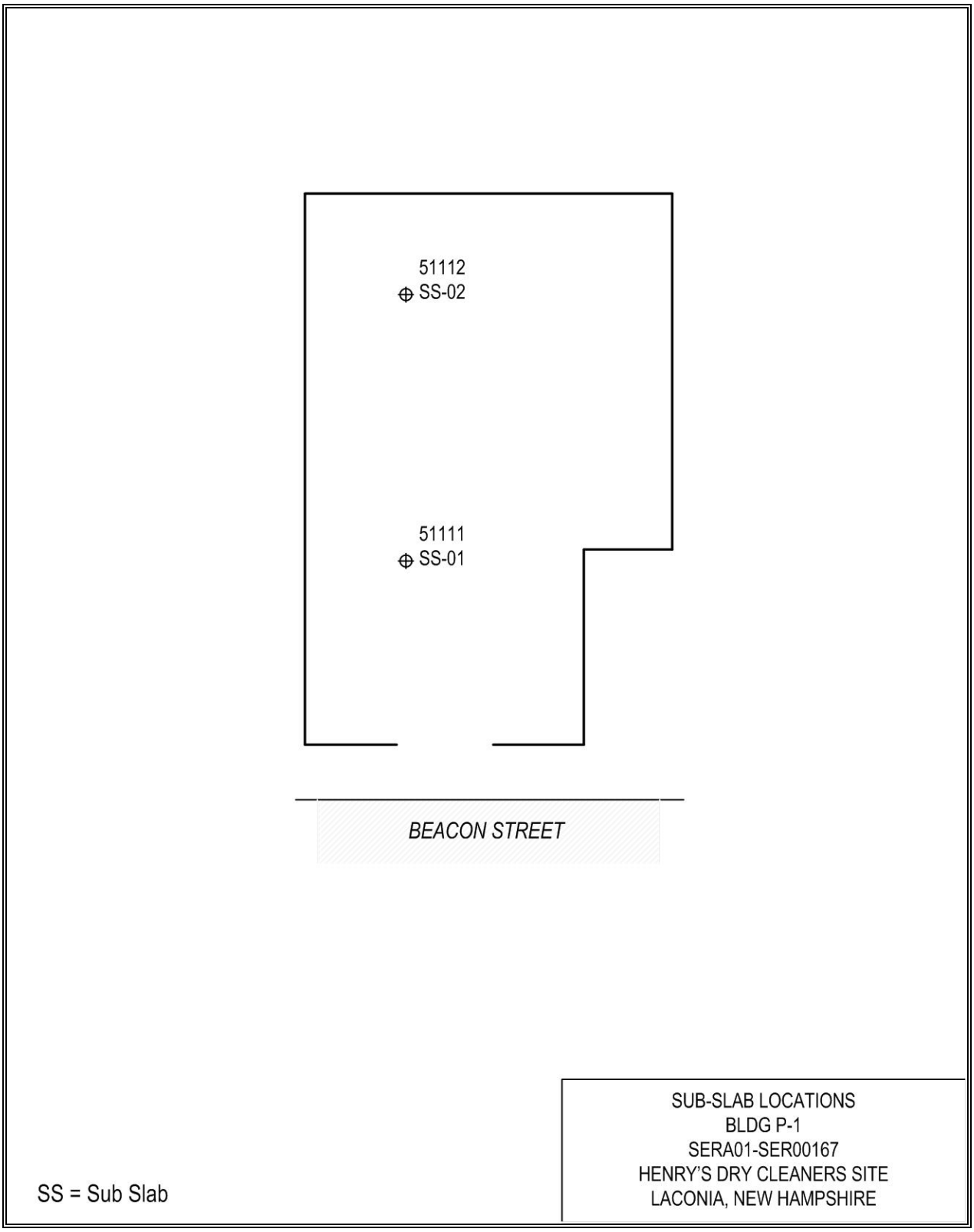


Figure 6: Sub-Slab Locations for BLDG P1

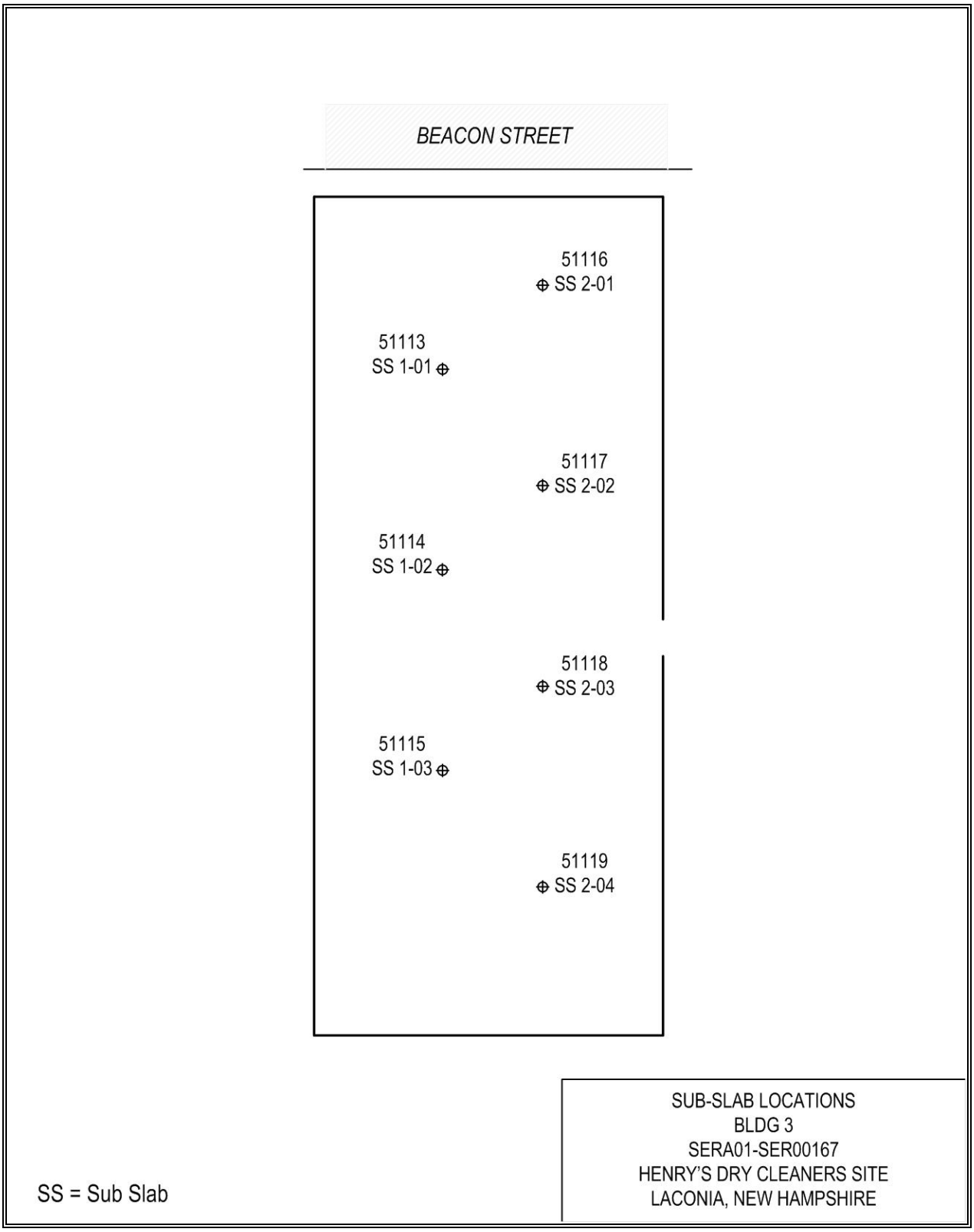


Figure 7: Sub-Slab Locations for BLDG 3

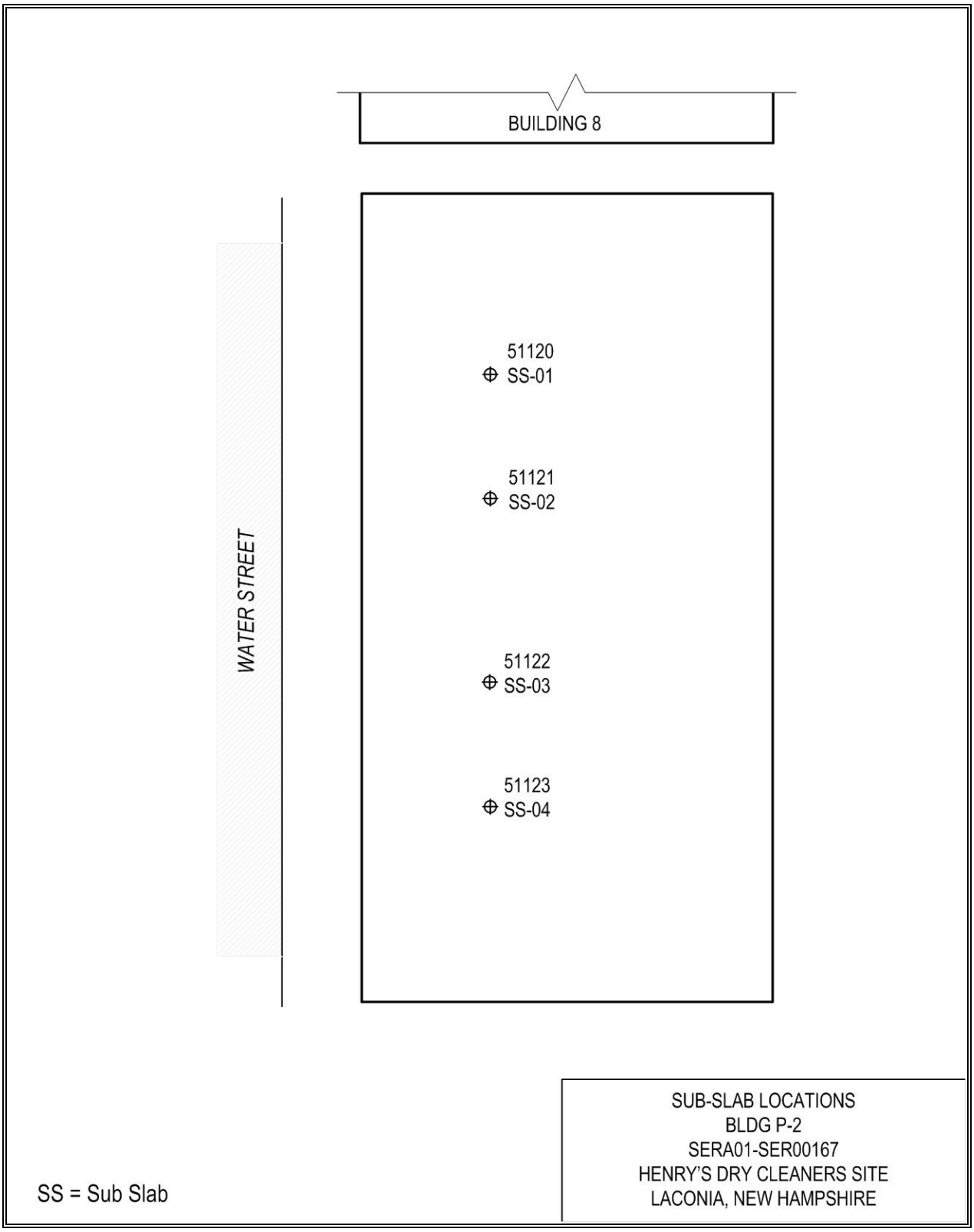


Figure 8: Sub-Slab Locations for BLDG P2

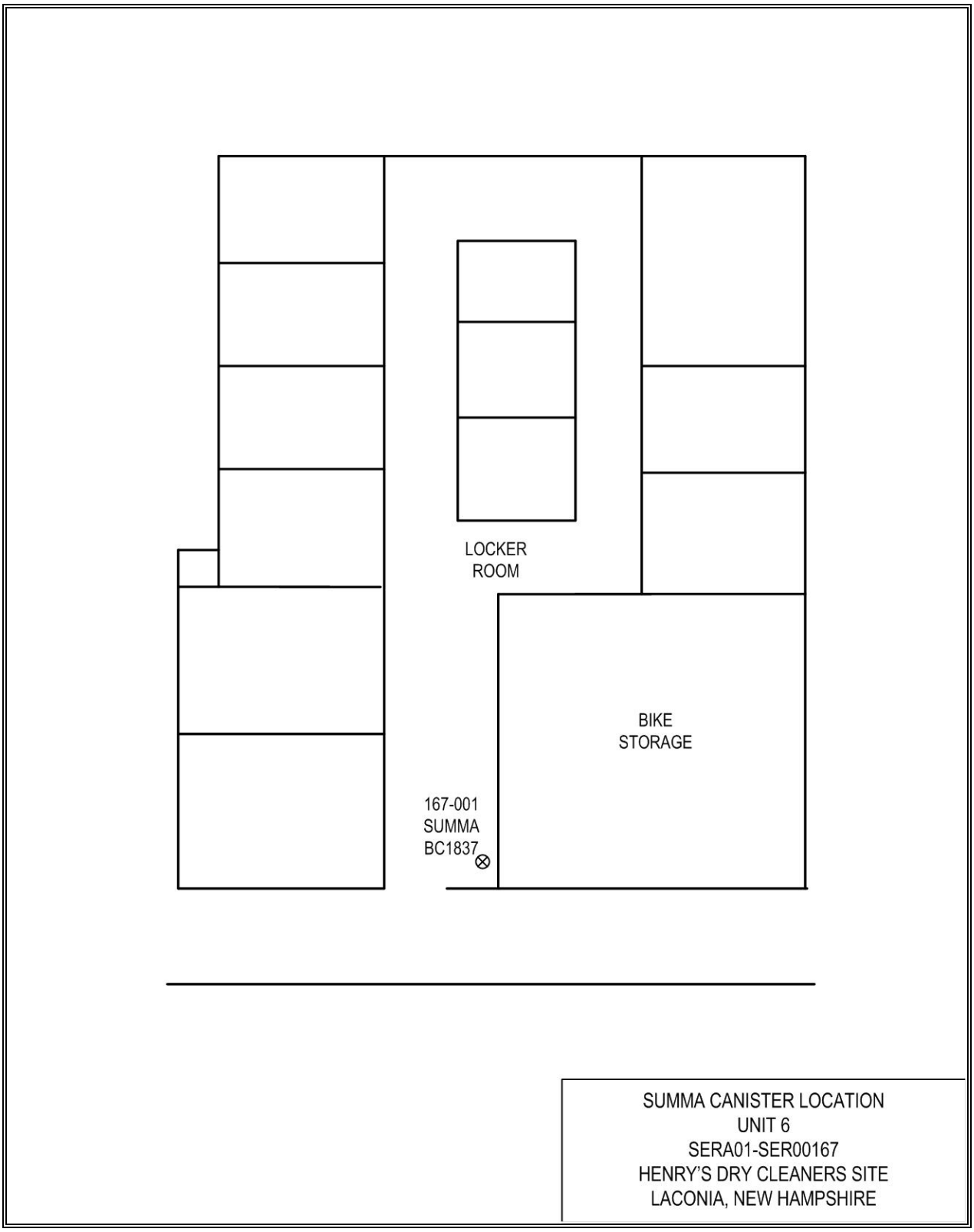


Figure 9: SUMMA® Canister Location for Unit 006

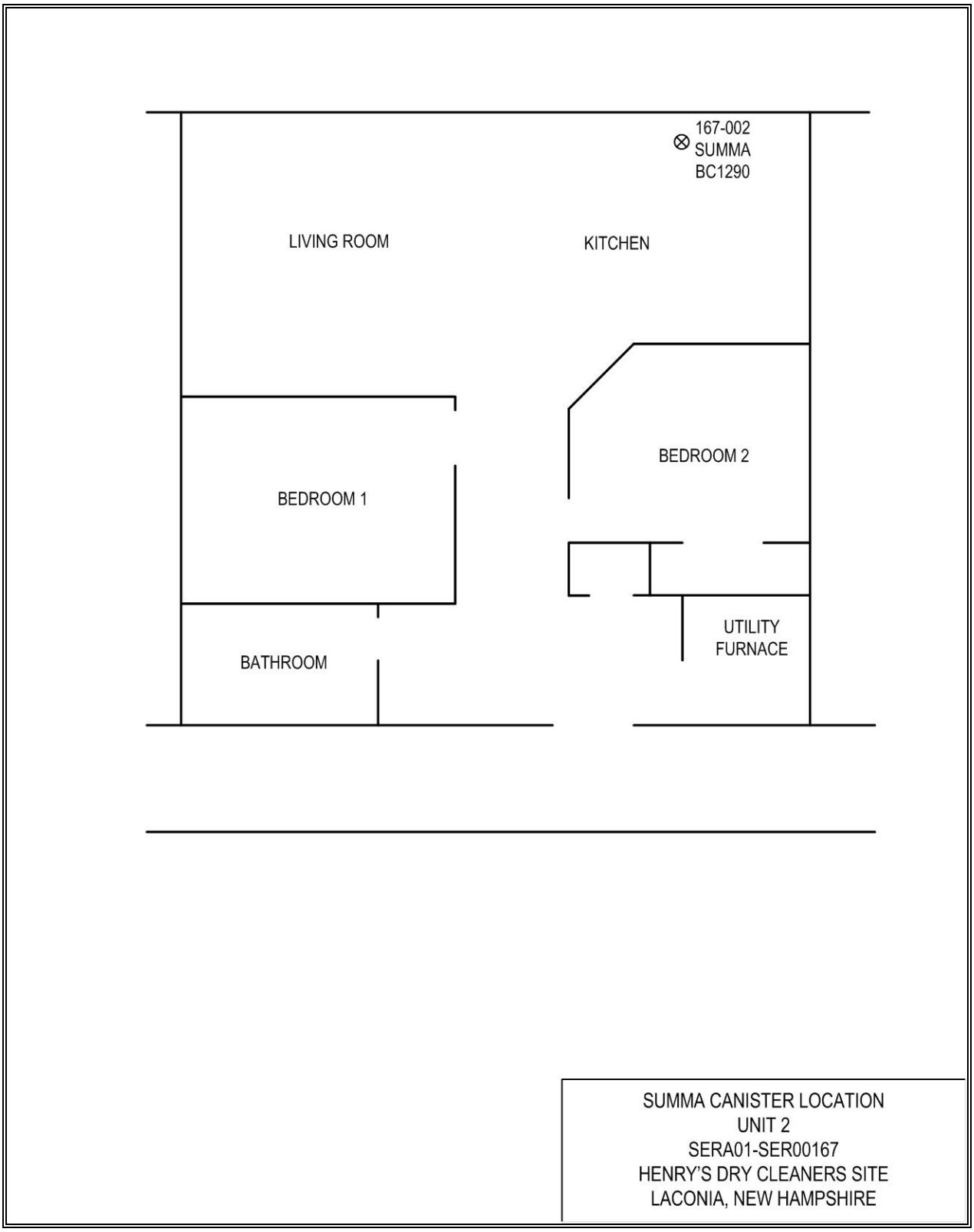


Figure 10: SUMMA® Canister Location for Unit 002

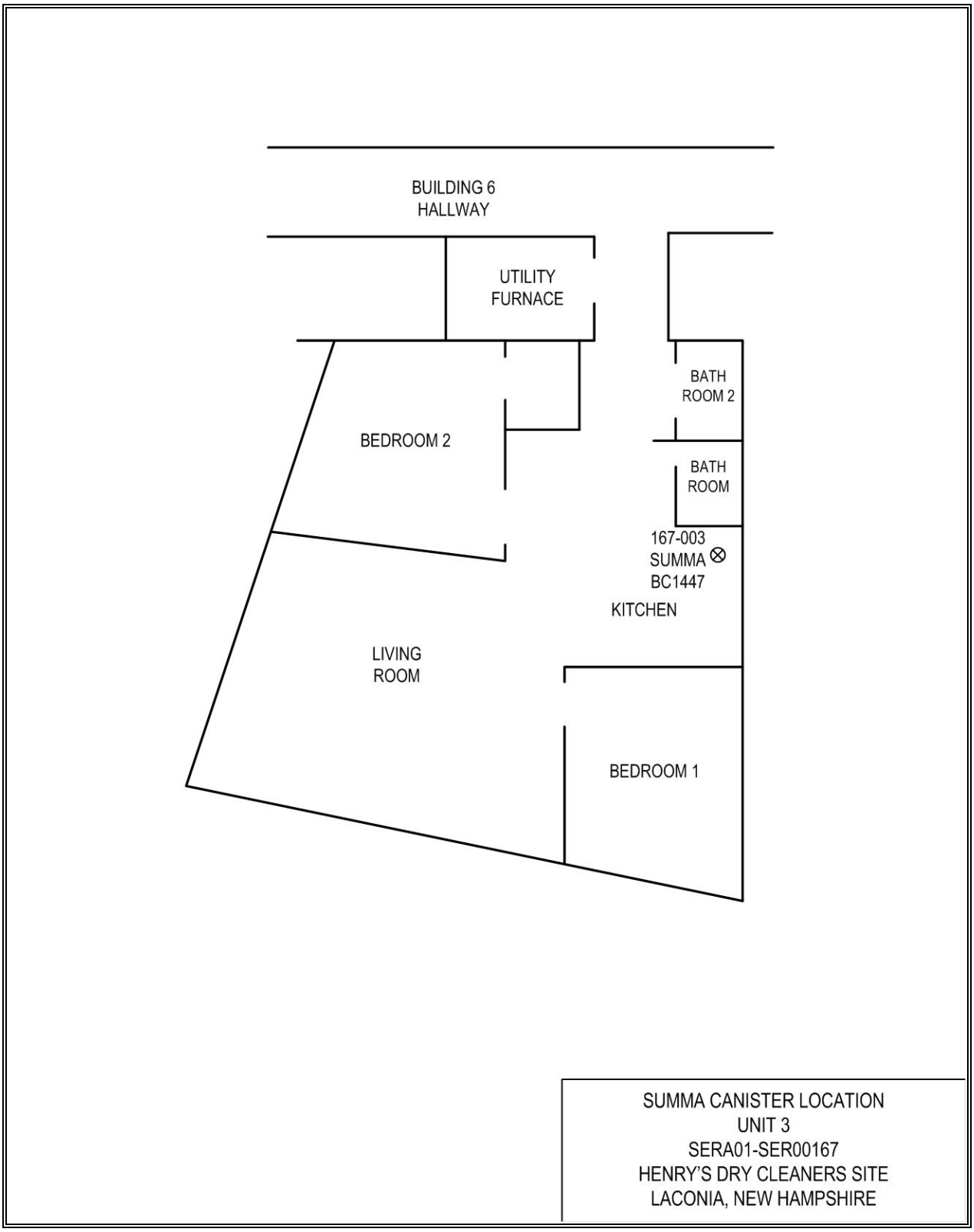


Figure 11: SUMMA® Canister Location for Unit 003

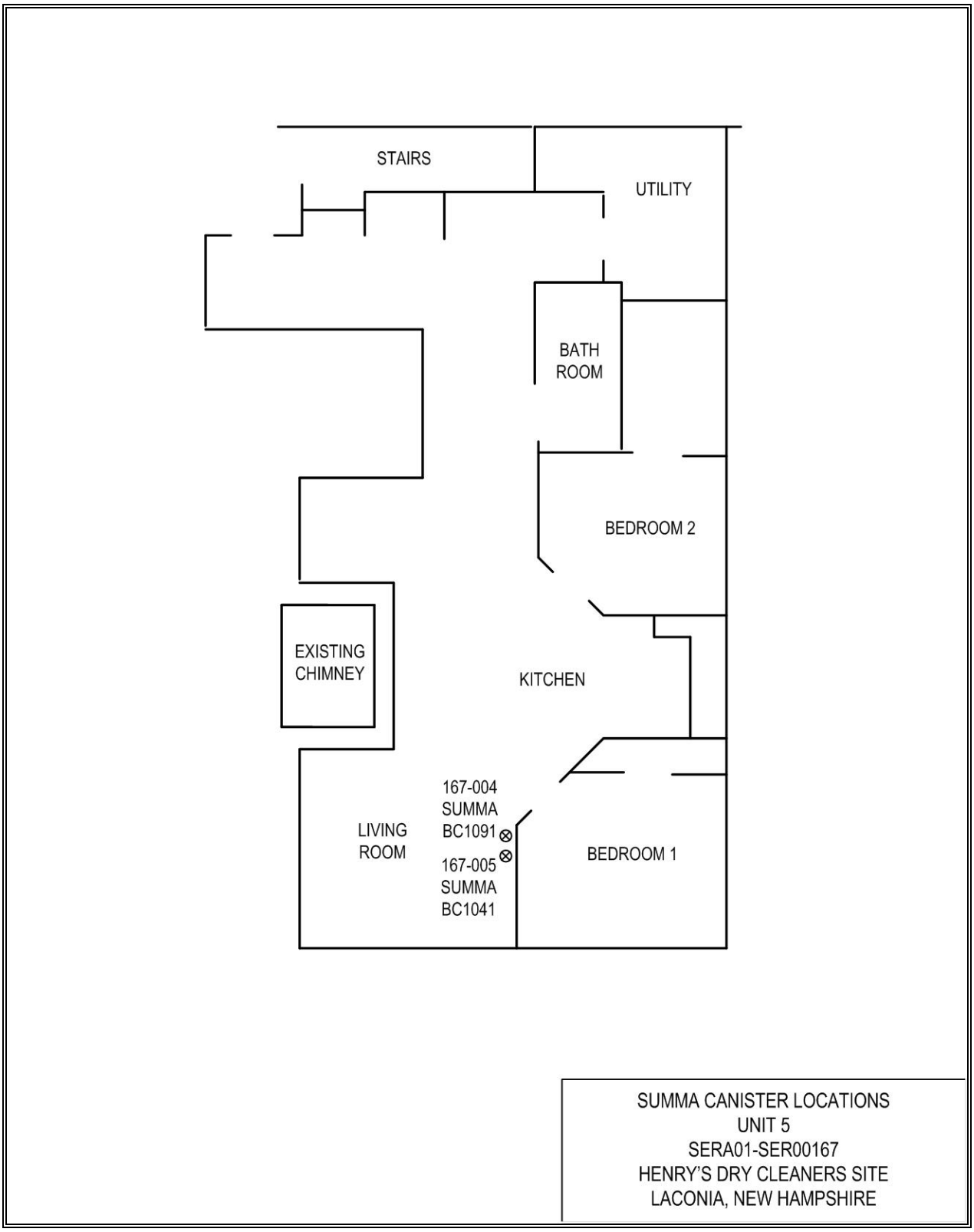


Figure 12: SUMMA® Canister Locations for Unit 005

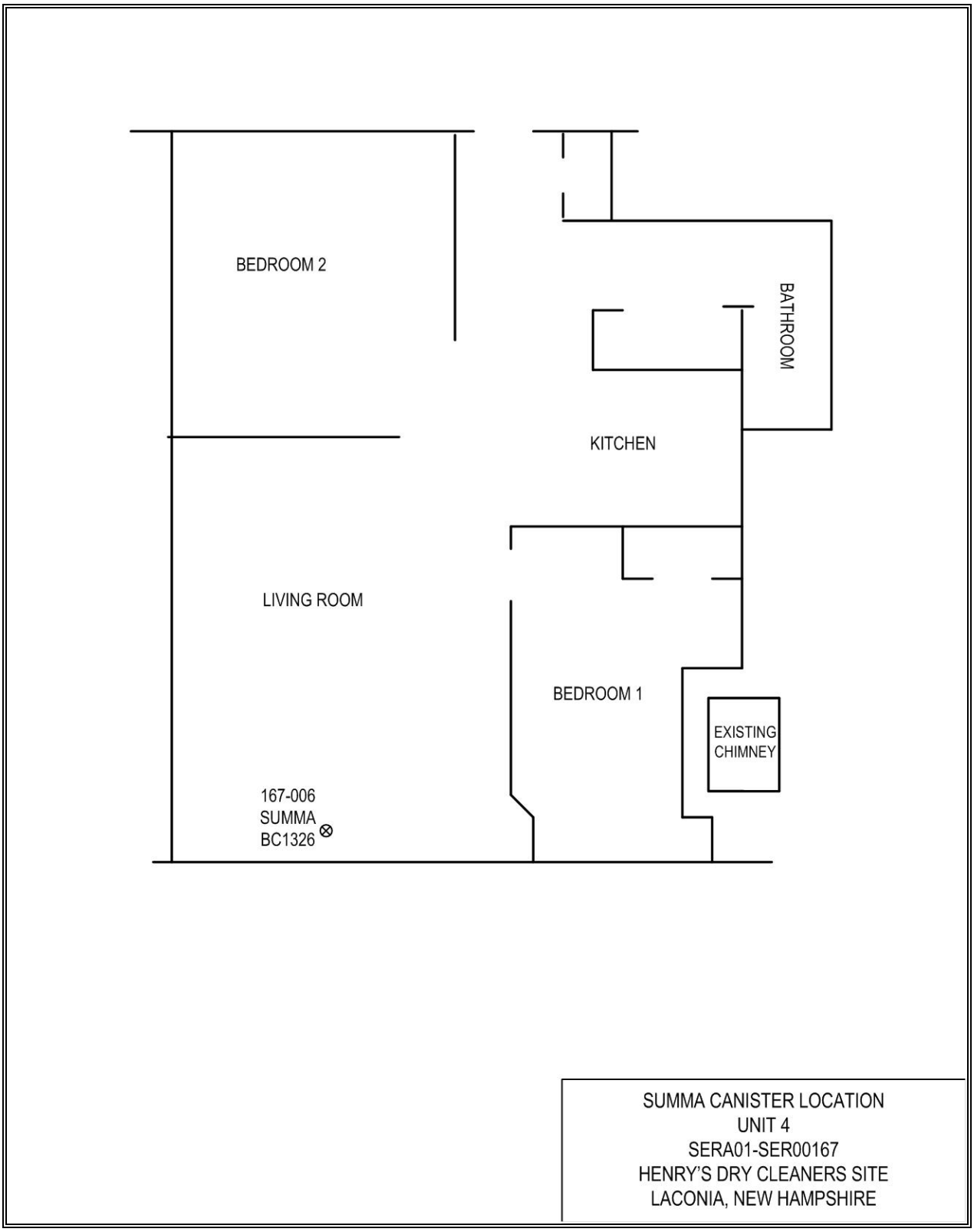


Figure 13: SUMMA® Canister Location for Unit 004

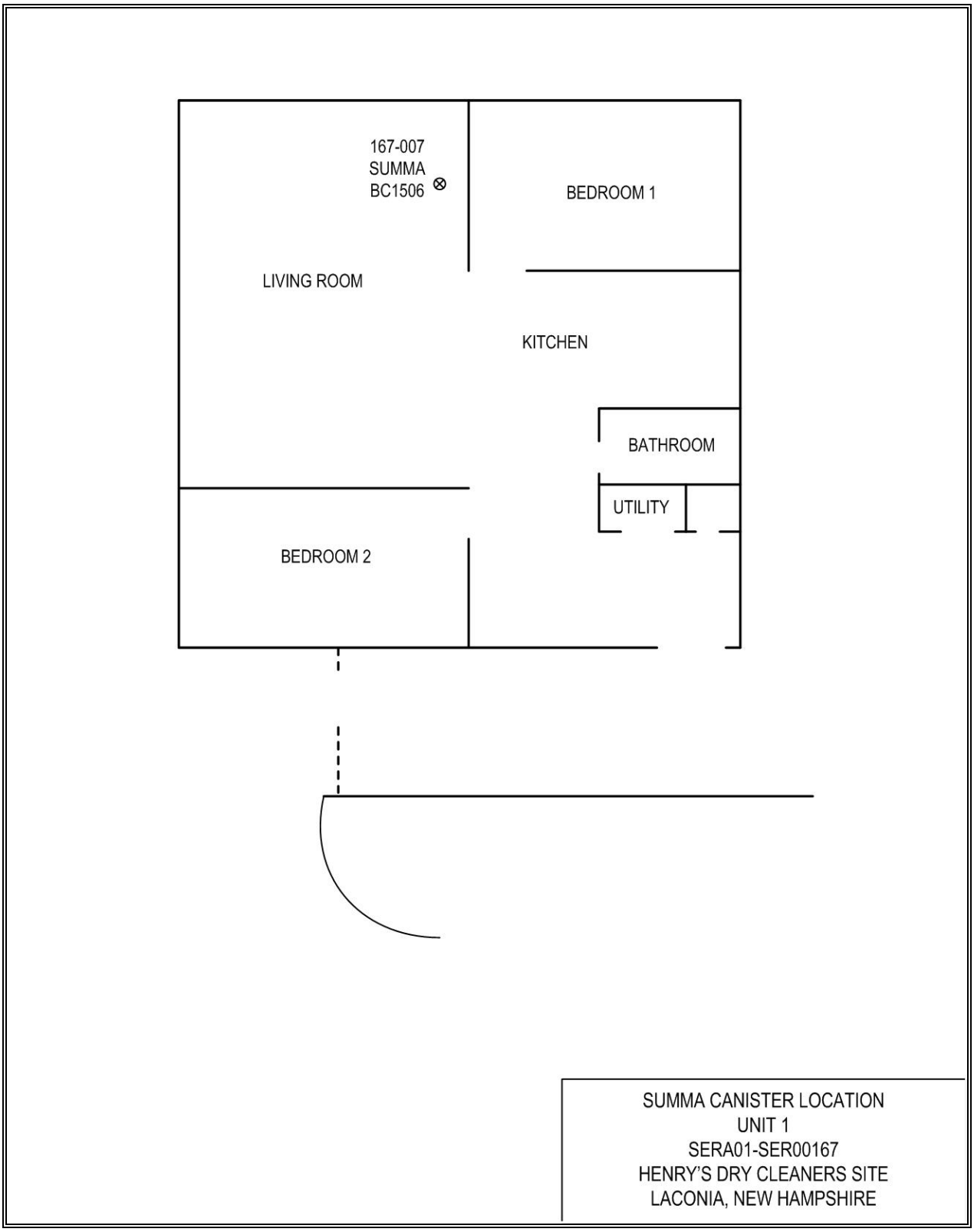


Figure 14: SUMMA® Canister Location for Unit 001

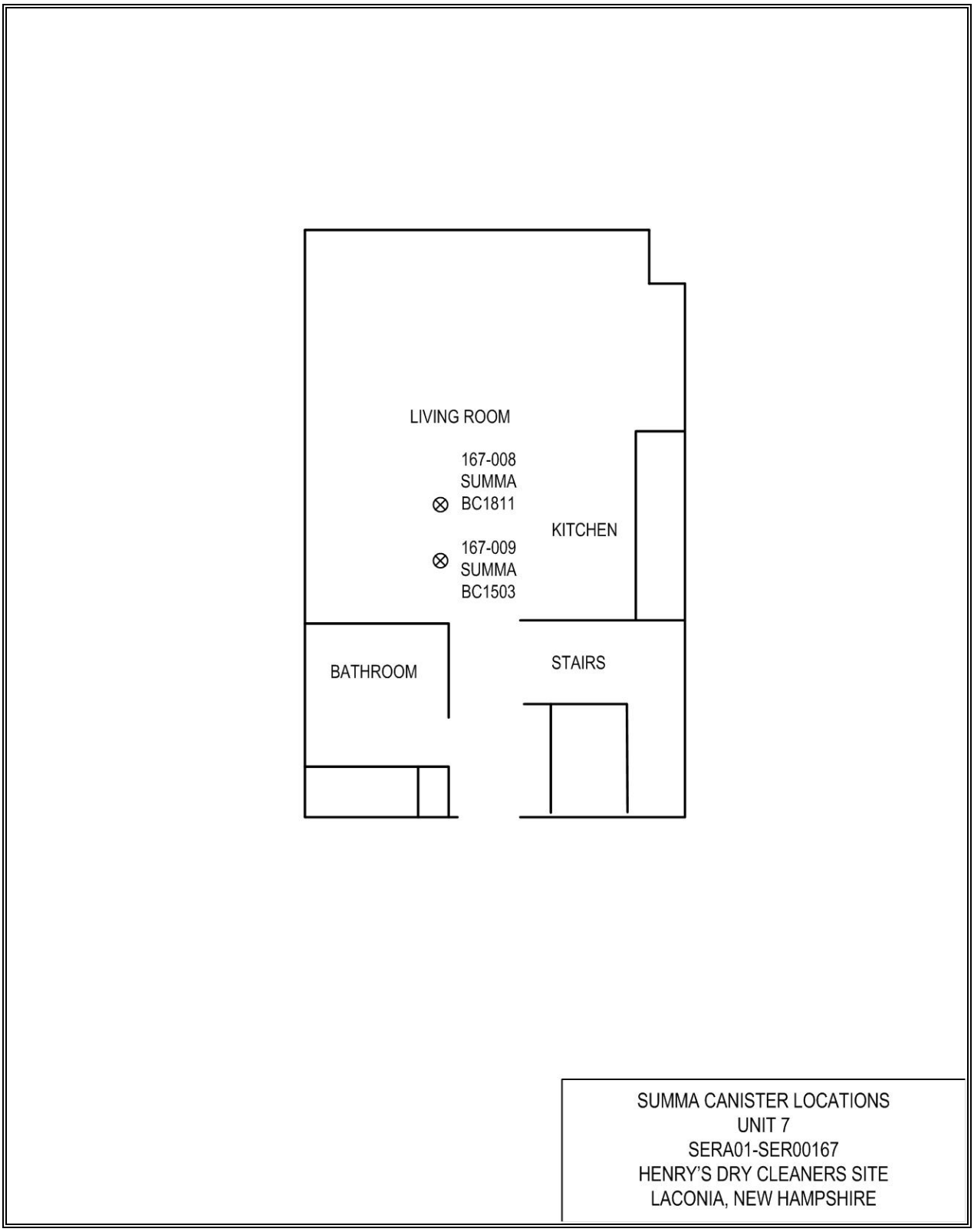


Figure 15: SUMMA® Canister Locations for Unit 007

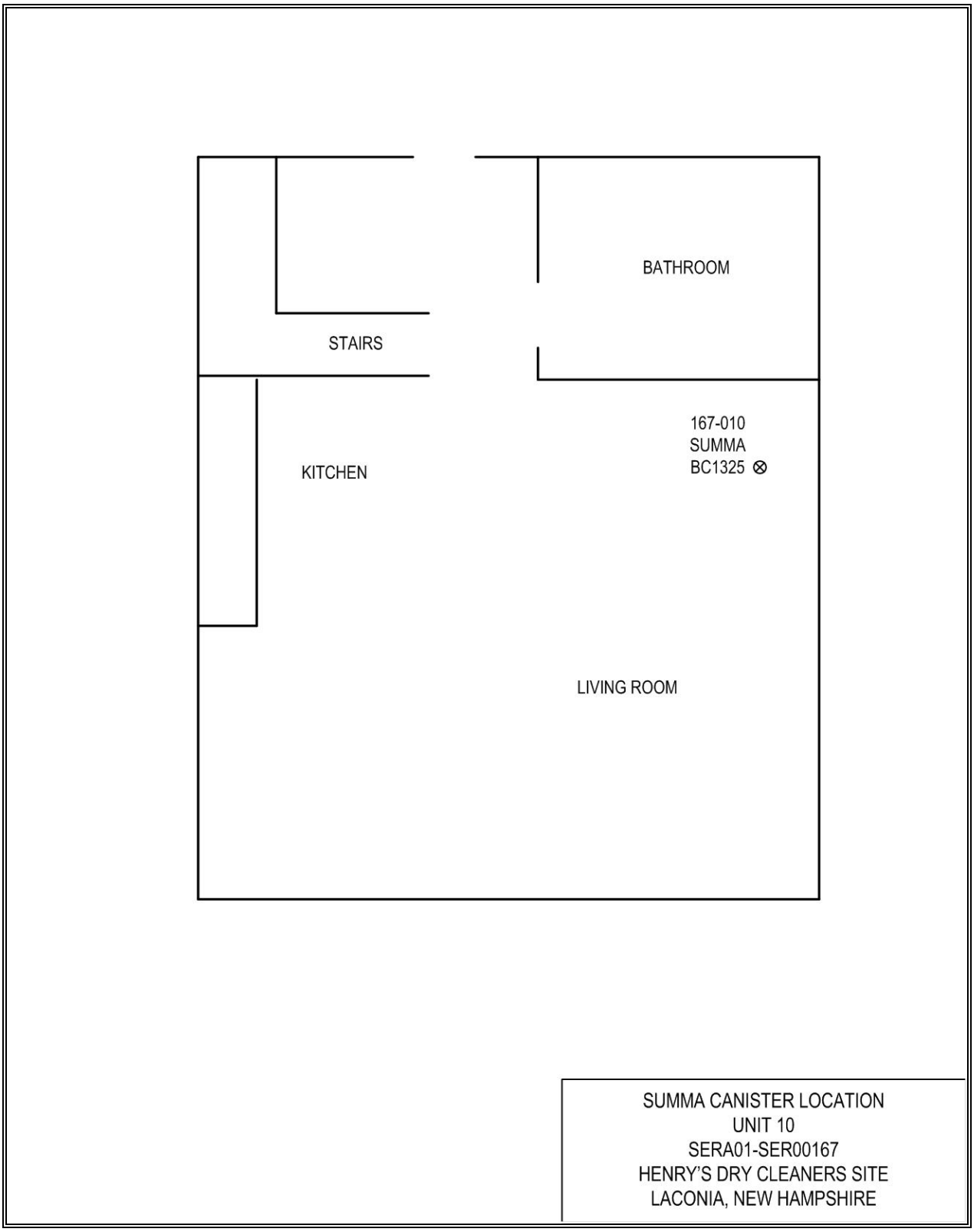


Figure 16: SUMMA® Canister Location for Unit 010

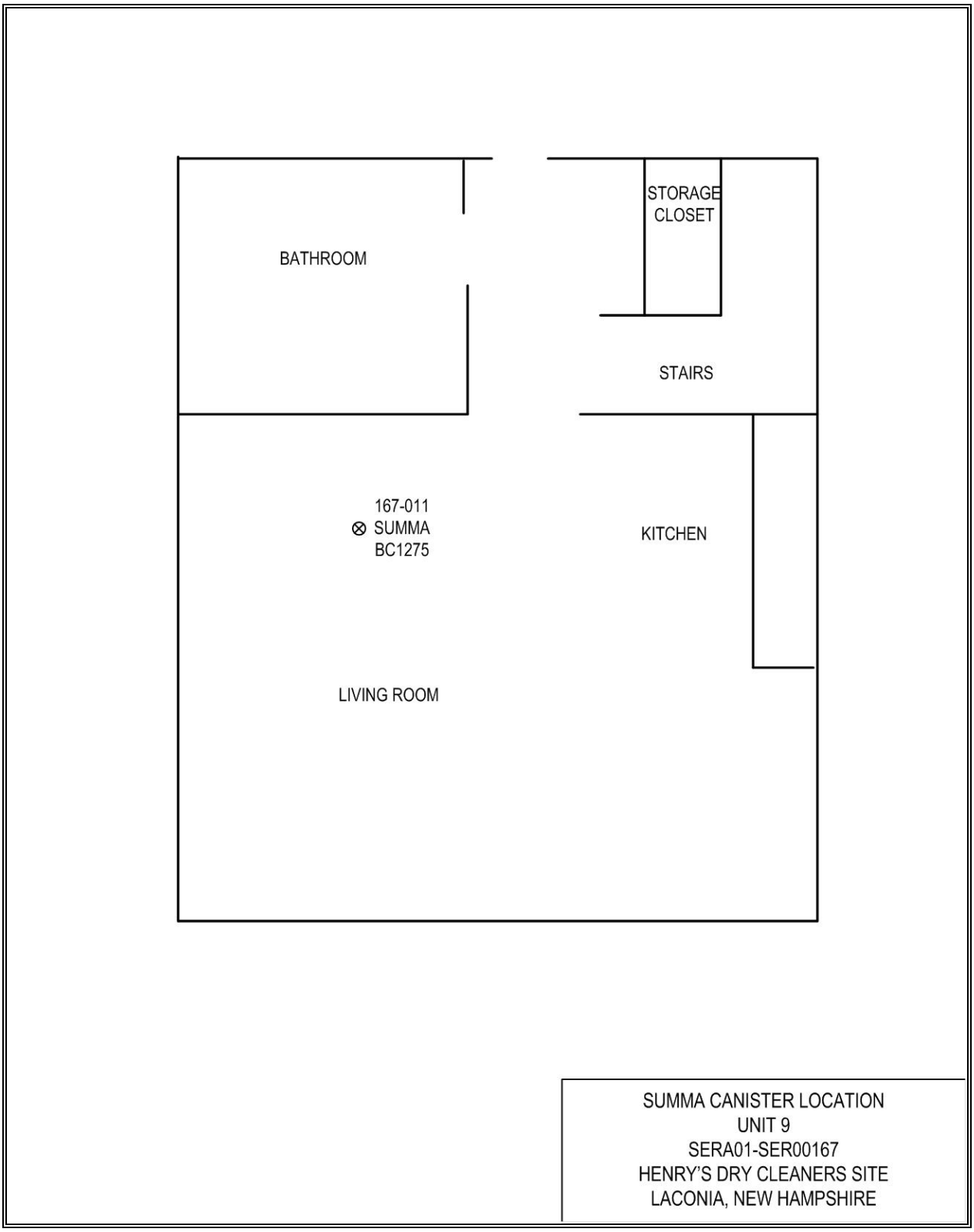


Figure 17: SUMMA® Canister Location for Unit 009

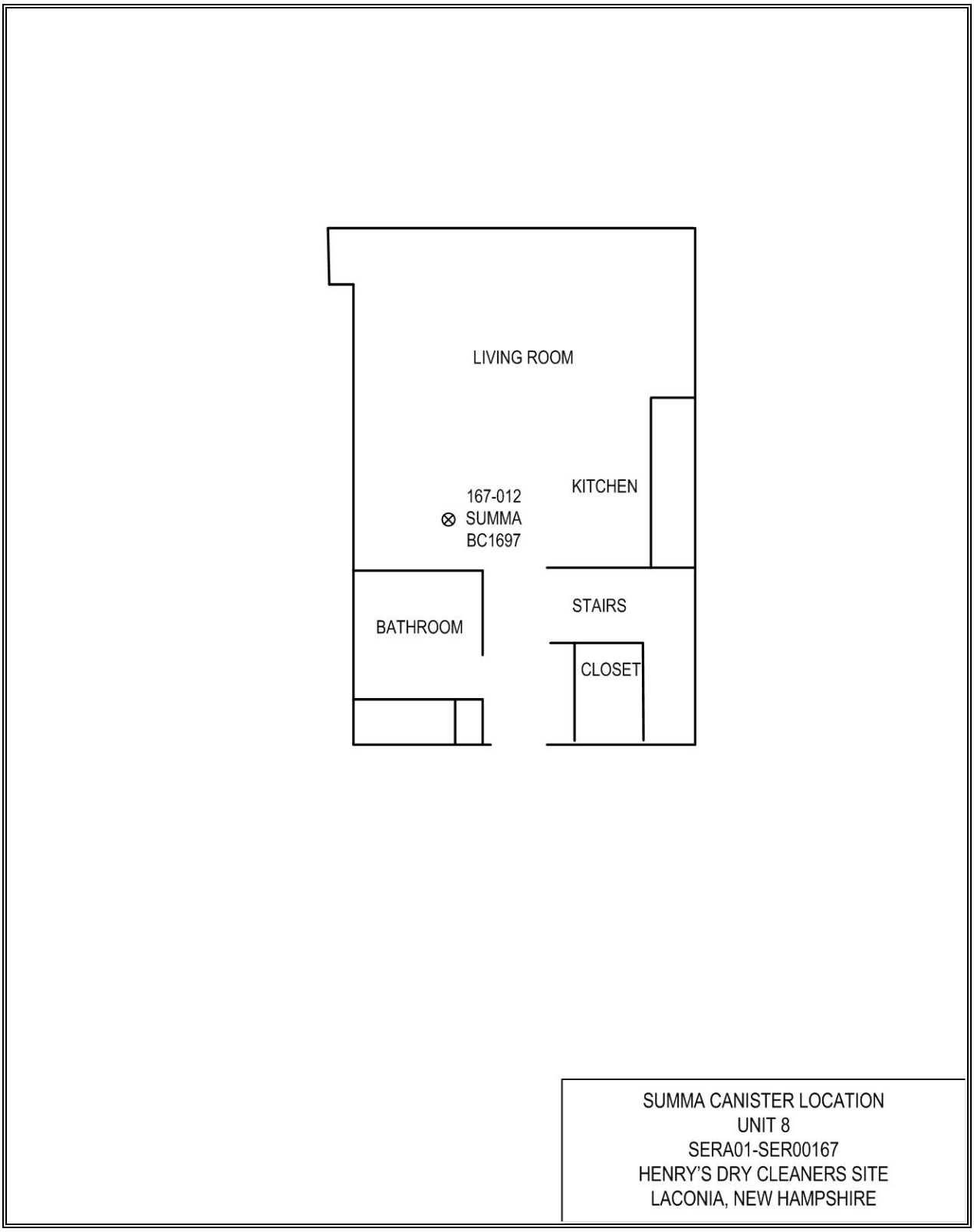


Figure 18: SUMMA® Canister Location for Unit 008

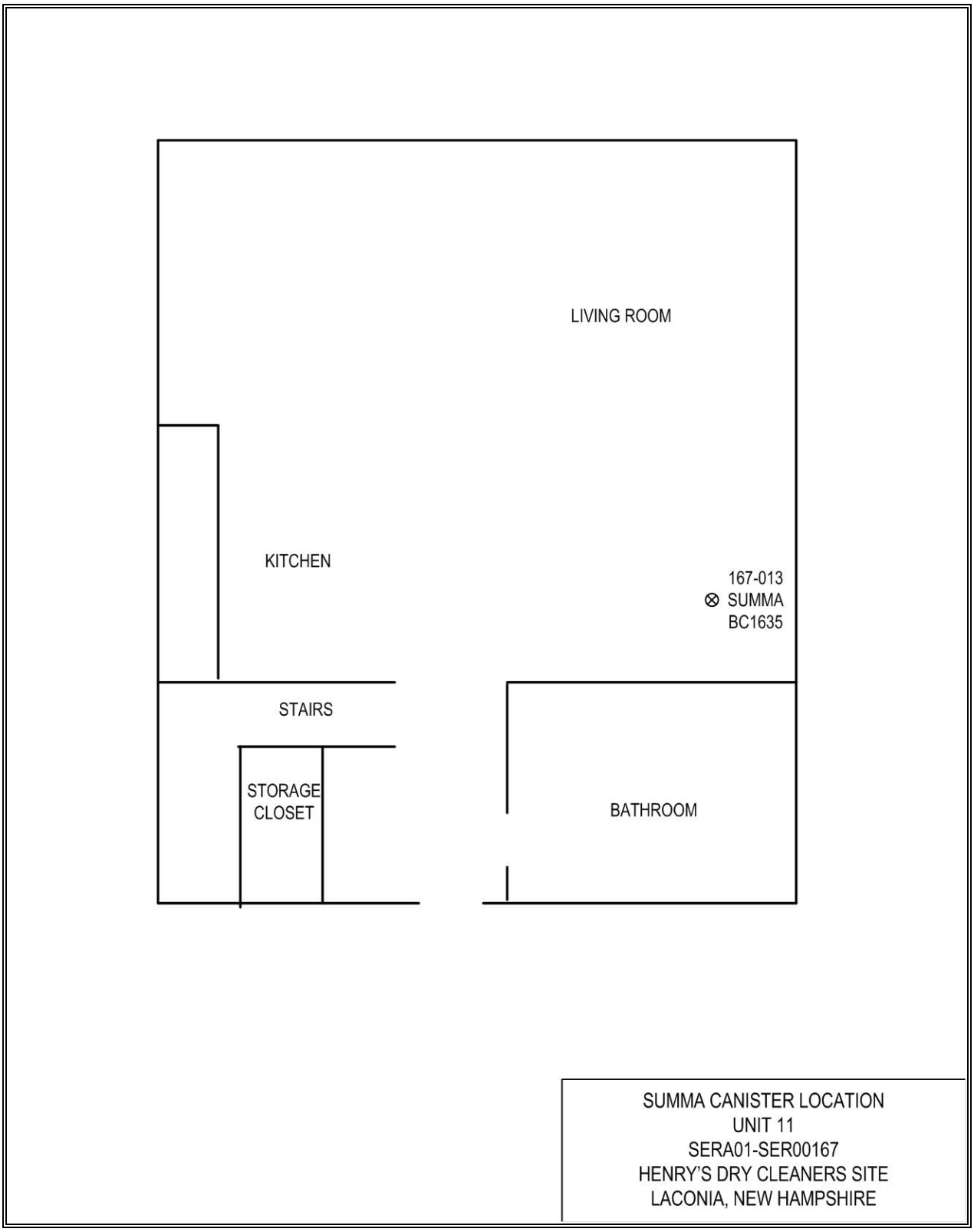


Figure 19: SUMMA® Canister Location for Unit 011

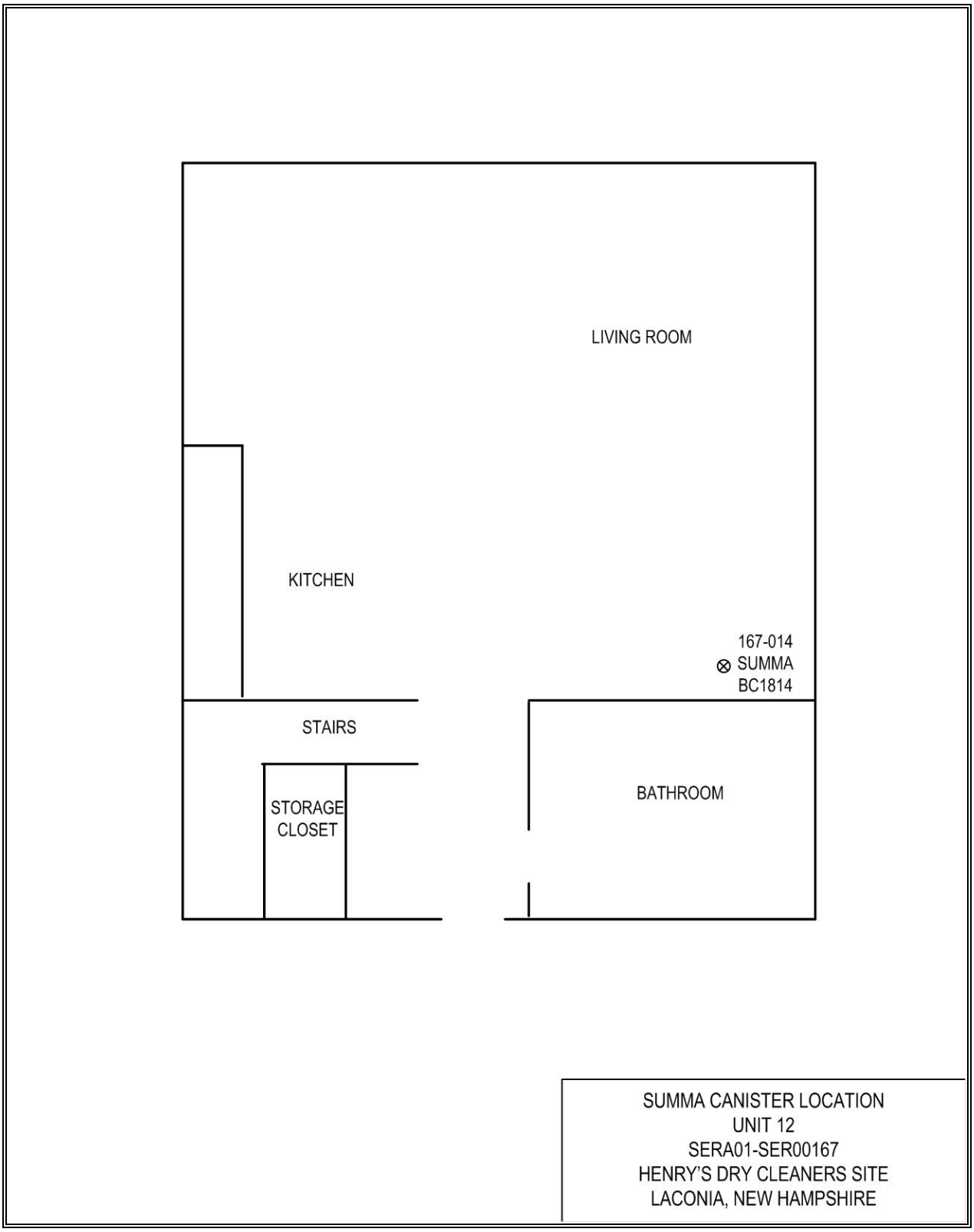


Figure 20: SUMMA® Canister Location for Unit 012

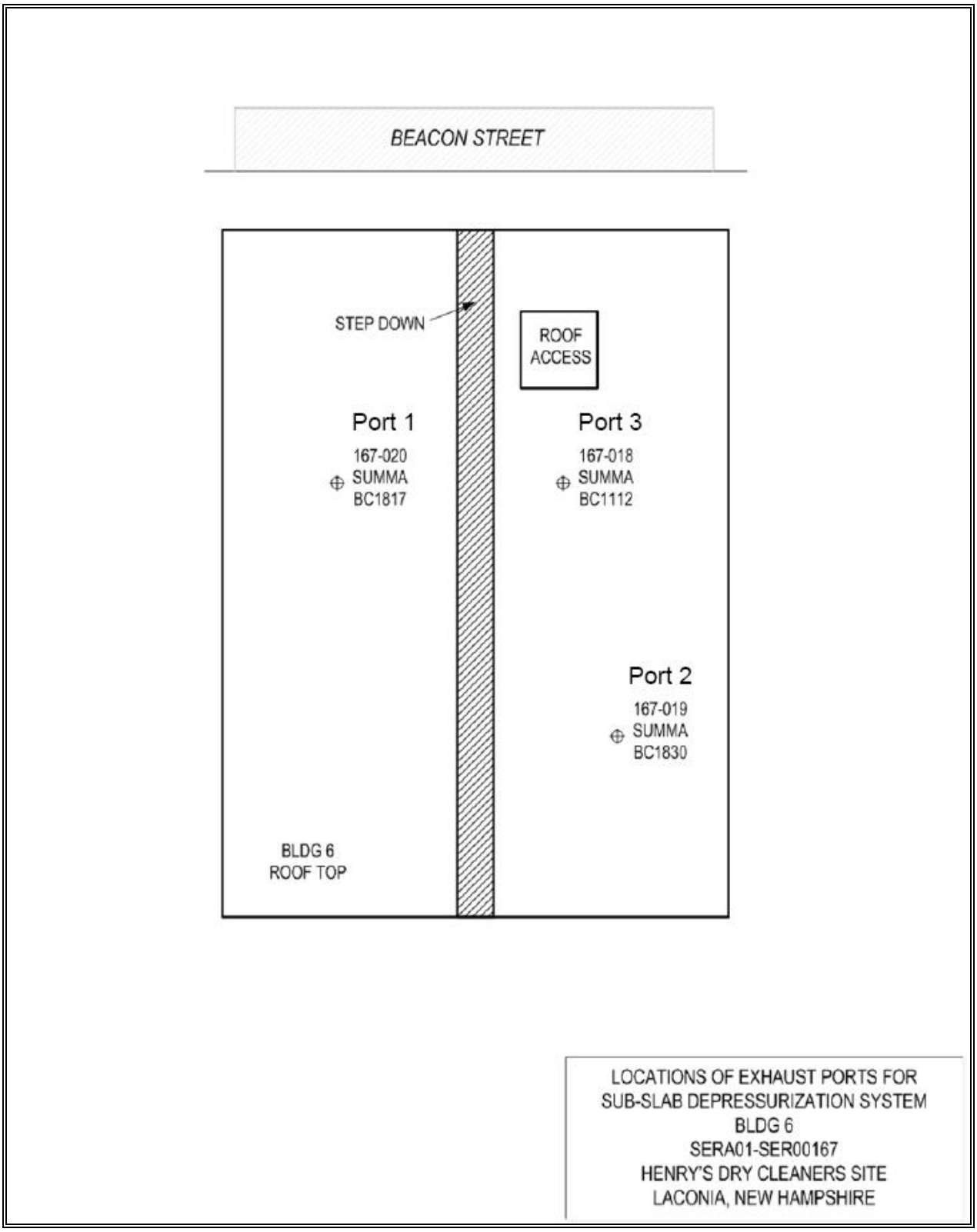
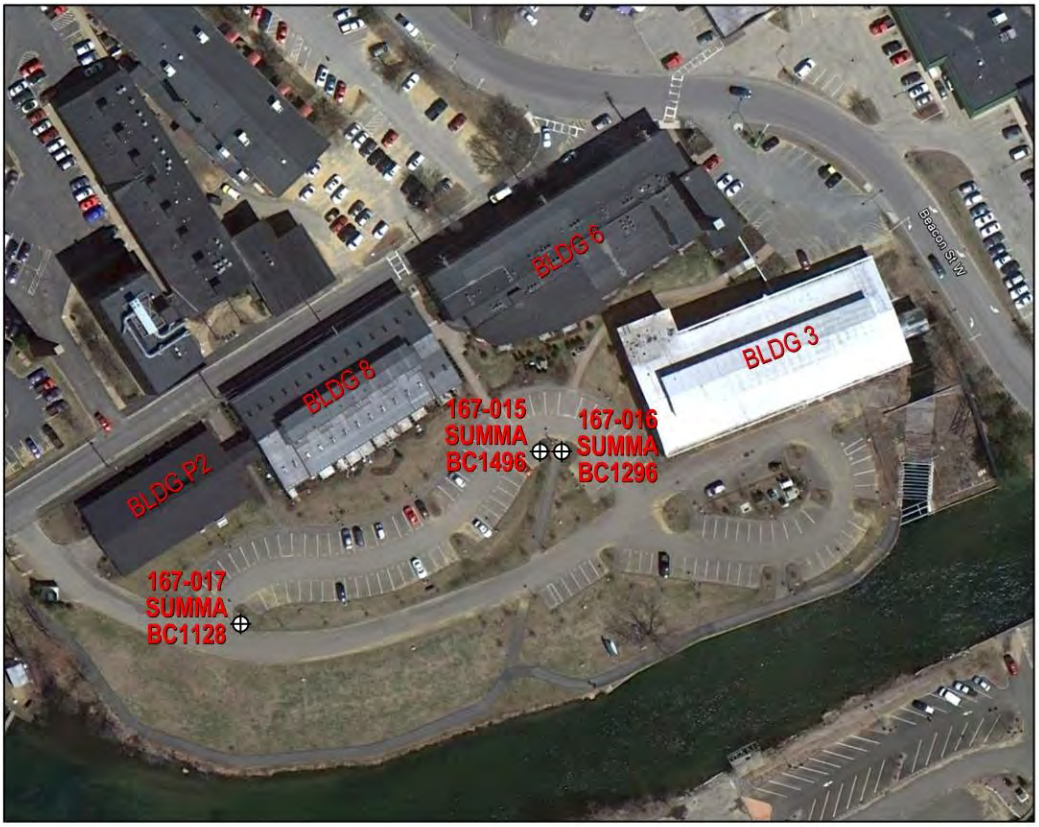


Figure 21: SUMMA® Canister Locations for BLDG 6



AMBIENT SUMMA CANISTER LOCATIONS
SERA01-SER00167
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE

Figure 22: SUMMA® Canister Locations for Outdoor Ambient Air

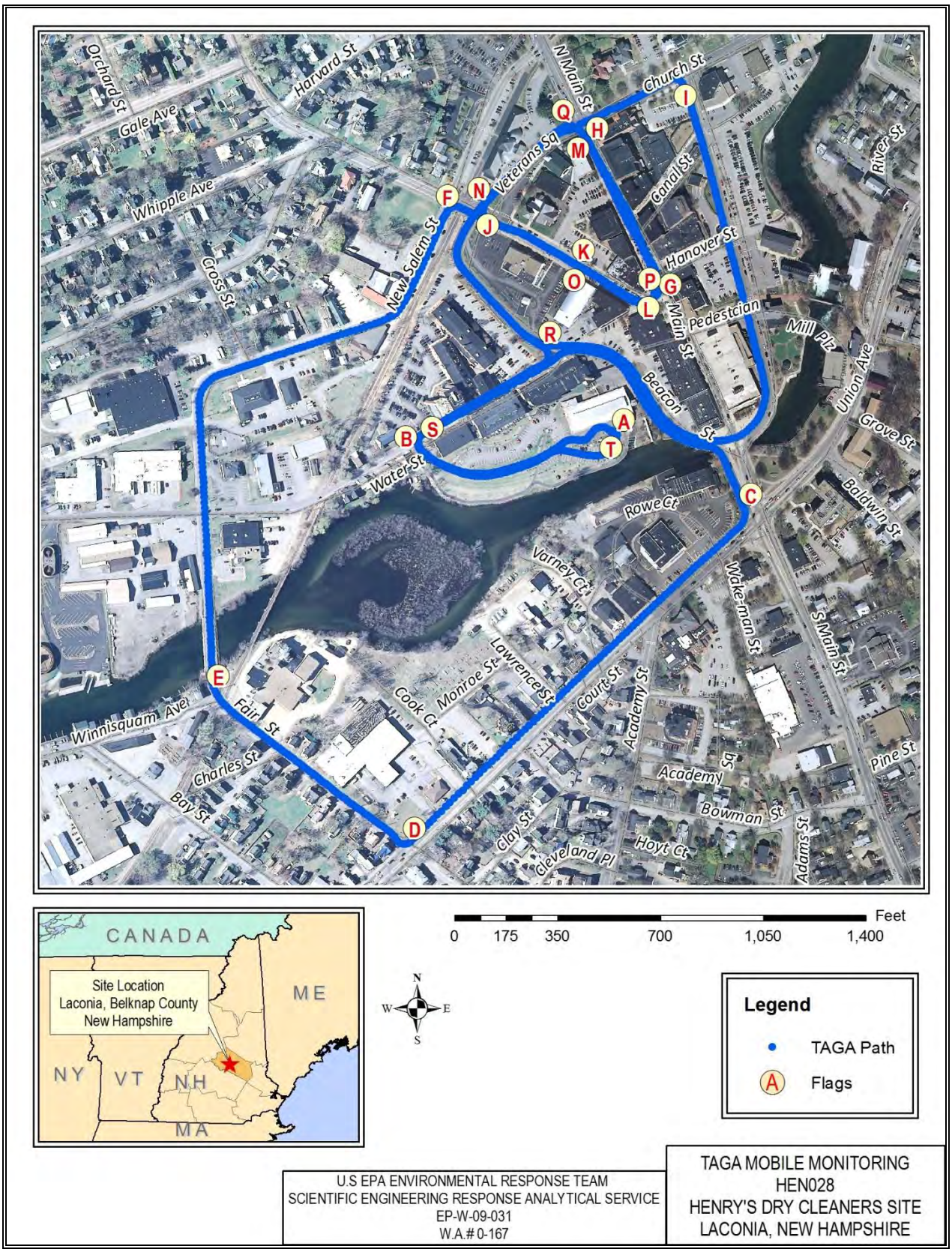


Figure 23: First Mobile Monitoring Event on 22 March 2012

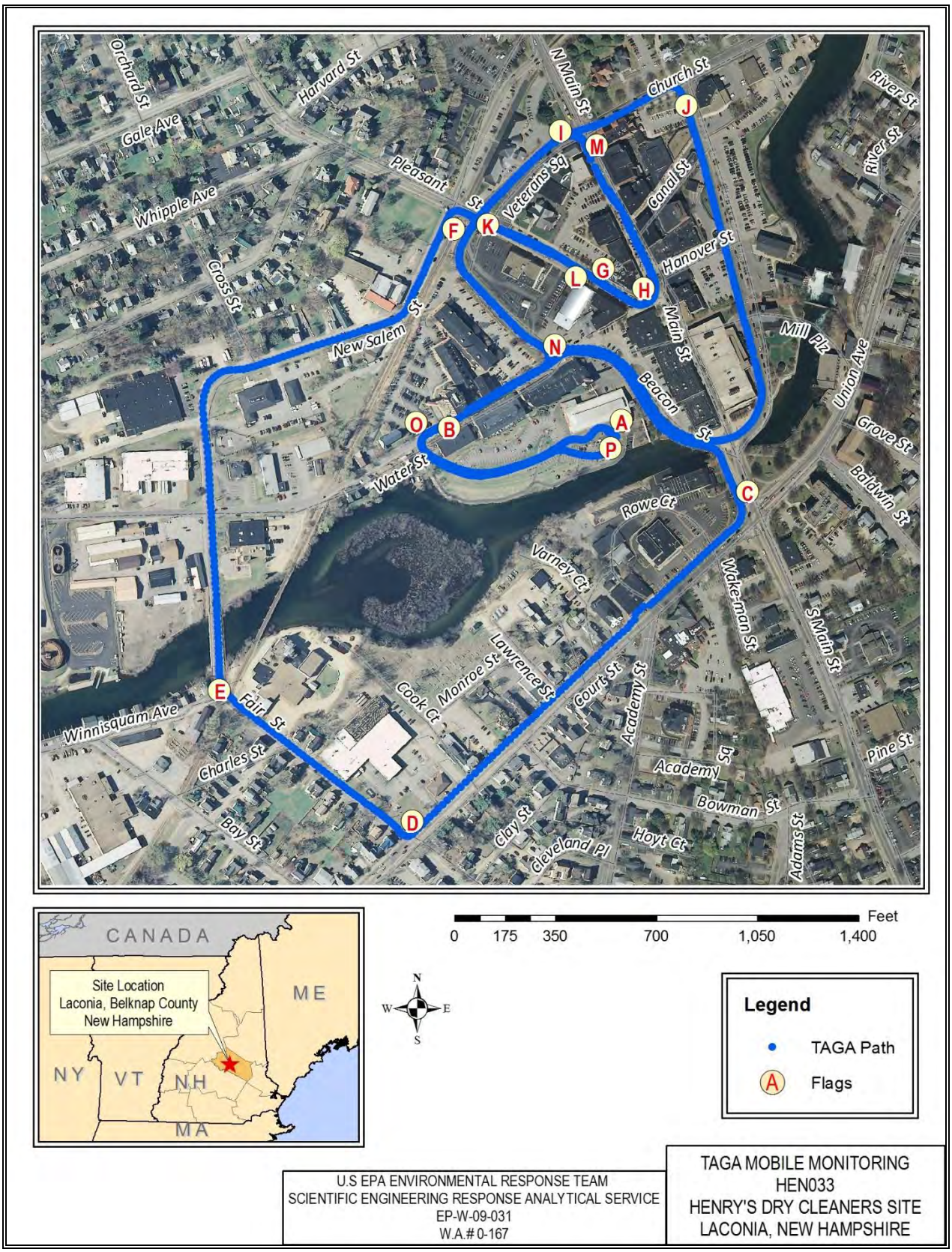


Figure 24: Second Mobile Monitoring Event on 22 March 2012

APPENDIX A

GC/MS Analytical Report

Henry's Dry Cleaners Site

Trip Report

May 2012

GC/MS ANALYTICAL REPORT
HENRY'S DRY CLEANERS SITE
LACONIA, NEW HAMPSHIRE
MARCH 2012

U.S. EPA Work Assignment No.: SERAS-167
LOCKHEED MARTIN Work Order No.: SER00167
U.S. EPA Contract No.: EP-W-09-031

Submitted to
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3/26/12
Date

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3/30/12
Date

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APPENDICES

Appendix A Chain of Custody Records
Appendix B Certificates of Analysis
Appendix C Calibration Data
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1.0 INTRODUCTION

The Environmental Protection Agency/Environmental Response Team (EPA/ERT) issued Work Assignment # SERAS-167 to Lockheed Martin under the Scientific, Engineering, Response, and Analytical Services (SERAS) contract to conduct a vapor intrusion study at the Henry's Dry Cleaners Site (Site) located in Laconia, New Hampshire (NH).

An Agilent®7890 gas chromatograph and 5975C Triple Axis mass spectrometer (GC/MS) were used to perform volatile organic compound (VOC) analysis on sub-slab soil gas samples collected in one-liter (L) Tedlar® bags. Six compounds comprised the target compound list (TCL): tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE) and vinyl chloride (VCL).

On-site analyses occurred on 21 March 2012 on the 24 sub-slab soil gas samples collected in Tedlar® bags by SERAS personnel at the Site. Analysis was performed in accordance with SERAS Draft Standard Operating Procedure (SOP) #1741, *Field Analysis of VOCs in Gaseous Phase Samples by GC/MSD Loop Injection.* All analytical data were verified per screening data (SD) requirements. Table 1 details the samples by chain of custody (COC) record, number of samples, sampled and received dates, sample matrix, and analysis. Copies of the COC records are included in Appendix A.

2.0 PROCEDURES

A Tedlar® bag was attached to the sample introduction port of the heated dual loop injection apparatus. One of the loops was filled with a sample and the other loop with internal standard. The contents of both loops were simultaneously injected onto the head of the column for subsequent analysis by GC/MS. The Agilent ChemStation® data system was used to evaluate and process the data. Table 2 lists the operating conditions of the dual loop injection apparatus and the GC/MS instrument.

2.1 Sub-Slab Soil Gas Analysis

An aliquant of sample was directly introduced into the first loop of the injection apparatus from a Tedlar® bag using the sample introduction port. The second loop was filled from a SUMMA® canister containing the internal standard. The loops were switched in line with the carrier gas to inject the sample and internal standard into the GC/MS instrument.

The GC oven was temperature programmed to focus the sample on the head of the column and to achieve quick separation of the VOCs in the sample, which were then detected by the MS detector. Comparing their retention times and mass spectra with those of the 500 part per billion by volume (ppbv) reference standard permits identification of the VOCs in the sample.

2.2 Tuning and Calibration Standards

All certified standards were obtained from commercial vendors and the certificates of analysis (COAs) are presented in Appendix B. The standards' cylinder numbers, concentrations, and compound quantitation ions used are presented in Table 3.

Mass spectrometer tuning was checked daily and re-tuned as needed. Five milliliters (mL) of p-bromofluorobenzene (BFB) at one part per million by volume (ppmv) were analyzed to validate the mass spectrometer tuning parameters.

The primary and secondary standards both contained 15 target compounds in a balance of nitrogen. The concentrations in the calibrations were based on the actual concentrations in the standards.

The internal standard mix consisted of bromochloromethane, 1,4-difluorobenzene, and chlorobenzene-d_5 each at approximately one ppmv. Fifty microliters (µL) of the internal standard,

equivalent to 10 ppbv in a 5-mL injection were added to all standards, blanks, and samples. After the instrument performance check standard criteria were met, the GC/MS was calibrated with a minimum of five concentrations that spanned the monitoring range of interest in an initial calibration sequence to determine the sensitivity and linearity of the instrument's response for the target compounds.

A continuing calibration, the mid-point concentration, was analyzed as a daily calibration check standard. Samples were analyzed in the 24-hour period after meeting the acceptance criteria for the continuing calibration.

2.3 Compound Identification and Quantitation

VOCs in the samples were identified and quantitated using the Agilent ChemStation® software. The software uses mass spectra reference libraries and extracted ion chromatograms matched with retention time windows to identify and quantify target compounds. The report format prints the internal standards, identified compound, calculated concentration, mass spectra (both raw and background subtracted), quantitation, and qualifier ion chromatograms.

The Reporting Limit (RL) for each compound was calculated using the following equation:

$$RL\ (ppbv) = Lowest\ Calibration\ Standard\ (ppbv) \times Dilution\ Factor\ (DF)$$

Dilution of a sample was performed when target compounds exceeded the upper range of the initial calibration. The dilution was documented in the injection logbook and the dilution factor was calculated using the following equation:

$$DF = \frac{Final\ Sample\ Volume\ (mL)}{Initial\ Sample\ Volume\ (mL)}$$

The target compound results were calculated using the following equation:

$$Concentration\ (ppbv) = Analytical\ Concentration\ of\ Compound\ (ppbv) \times DF$$

2.4 Quality Assurance/Quality Control

The following Quality Assurance/Quality Control (QA/QC) procedures were performed for this assignment:

- The GC/MS was tuned, as needed, with perfluorotributylamine (PFTBA) to meet ion abundance criteria for BFB, as listed in the BFB report included in the calibration data section (Appendix C).

- A six-point initial calibration and/or a continuing calibration were prepared, analyzed, and acceptance criteria verified prior to sample analysis. Evaluations for the initial calibration standards (ICAL STD) and/or continuing calibration verification (CCV) standard are in the calibration data section (Appendix C).

- Immediately following an initial calibration, the initial calibration verification (ICV) standard was prepared from the secondary source standard, analyzed, and acceptance criteria verified. Evaluation of the ICV standard is in the calibration data section (Appendix C).

- Method blanks were analyzed after the calibration standard(s) and before samples were analyzed to assess possible laboratory contamination and/or carryover. When necessary,

method blanks were analyzed to minimize carryover from standards or samples with high levels of target or non-target VOCs.

- During the 24-hour analytical period, at least one laboratory control sample (LCS) was prepared from the secondary standard, analyzed, and acceptance criteria verified. Table 5 lists the summary of the LCS results for VOCs. Evaluations for the LCS results are in the calibration data section (Appendix C).

- Internal standards from all standards, method blanks and samples were evaluated and acceptance criteria verified. Evaluations for the internal standards are in the calibration data section (Appendix C).

- During the 24-hour analytical period, at least one replicate sample (RS) was analyzed and acceptance criteria verified. Table 6 lists the replicate sample summary for VOCs in sub-slab soil gas samples. Evaluations for the replicate sample results are in the quantitation reports section (Appendix D).

- The lowest calibration standard used in the initial calibration was used for the RL.

- The following is a list of the QA/QC flags used in qualifying the results:

  B - Concentration less than five times the reported blank result. Result is considered not detected.
  U - None detected at or above the RL.
  D - Result is from an analysis at a secondary dilution factor.

All applicable data qualifiers were inserted into the results table.

3.0 RESULTS

All results are reported in ppbv and to two significant figures. Target compound results are presented in Table 4. Results for the LCS are presented in Table 5. Results for the replicate samples are presented in Table 6.

The COC records are found in Appendix A. The COAs, for all standards used, are found in Appendix B. The calibration package for each day of analysis is included in Appendix C. This package includes copies of the injection logbook # SERAS-L-0296, BFB tune reports, air and water check reports, initial and continuing calibration reports, ICV and LCS evaluation reports, all standard quantitation reports and internal standard evaluations. Quantitation reports for all method blanks and sub-slab soil gas samples are included in Appendix D.

All quantitation reports list the retention times, quantitation ions, peak areas, and concentrations of target compounds in ppbv. Calculated concentrations are generated using the average relative response factor from the initial calibration curve for each target compound.

4.0 DISCUSSION OF RESULTS

On 16 March 2012, the BFB and six ICAL STDs were prepared, analyzed, reviewed and found to be acceptable. The ICV standard, method blank and LCS on 16 March 2012 were prepared, analyzed, reviewed and found to meet acceptance criteria.

On 21 March 2012, the BFB, CCV standard, method blank and LCS were prepared, analyzed, reviewed and found to meet acceptance criteria. Twenty-four (24) sub-slab soil gas samples were collected and analyzed on site by SERAS personnel. All internal standards for samples analyzed on 21 March 2012 were reviewed and found to be within the acceptable range. Preliminary results were reported on-site to the Work Assignment Manager (WAM).

The three LCS analyzed on 21 March 2012 were reviewed and found to meet acceptance criteria. LCS data are reported in Table 5. The RS analyzed on 21 March 2012 was reviewed and found to be acceptable. The RS data for 21 March 2012 is presented in Table 6 and has relative percent differences (RPD) ranging from not calculable, due to the target compound being non detected below the RL, to 0%.

Of the 24 sub-slab soil gas samples collected on 21 March 2012, sample numbers 51110 (BLDG G-SS-01), 51107 (BLDG H-SS-01) and 51108 (BLDG H-SS-02) have the highest reportable results for tetrachloroethene at 21,000 ppbv, 13,000 ppbv and 4,800 ppbv, respectively. Sample numbers 51110 (BLDG G-SS-01), 51108 (BLDG H-SS-02), 51107 (BLDG H-SS-01) and 51109 (BLDG H-SS-03) have the highest reportable results for trichloroethene at 1,100 ppbv, 81 ppbv, 76 ppbv and 76 ppbv, respectively. Sample numbers 51110 (BLDG G-SS-01), 51109 (BLDG H-SS-03) and 51108 (BLDG H-SS-02) have the highest reportable results for cis-1,2-dichloroethene at 7,700 ppbv, 540 ppbv and 100 ppbv, respectively. Sample numbers 51110 (BLDG G-SS-01), 51109 (BLDG H-SS-03) and 51108 (BLDG H-SS-02) have the highest reportable results for trans-1,2-dichloroethene at 13 ppbv, 6.2 ppbv and 0.90 ppbv, respectively. Sample number 51110 (BLDG G-SS-01) had the highest reportable results for 1,1-dichloroethene at 8.4 ppbv. Vinyl chloride was not detected in any sub-slab soil gas sampled collected in Tedlar bags on 21 March 2012.

TABLES

TABLE 1
Summary of Chain of Custody Records
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

COC #	Number of Samples	Date Sampled	Date Received	Matrix	Analysis
07320	19	03/21/2012	03/21/2012	Sub-Slab Soil Gas	VOC / Loop GC/MS Method
07321	5	03/21/2012	03/21/2012	Sub-Slab Soil Gas	VOC / Loop GC/MS Method

TABLE 2
Instrument Conditions for Analysis of Volatile Organic Compounds
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

AGILENT® GC	
Sample Loop	
Loop Volume	5 mL
Loop Temperature	160°C
Internal Standard Loop	
Loop Volume	50 µL (equivalent to 10ppbv)
Loop Temperature	160°C
GC Inlet	
Gas Type	Helium
Mode	Pulsed Splitless
Temperature	190°C
Pressure	23.099 psi
Pulsed Pressure	50.0 psi
Pulsed Time	0.50 minute
Purge Flow	30.0 mL/minute
Purge Time	0.00 minute
Septum Purge Flow	3 mL/minute
Total Flow	34.5 mL/ minute
GC Oven	
Column	Rtx-Volatiles, 20 m x 0.18 mm ID x 2.0 μm df
Mode	Constant Flow
Flow Rate	1.5 mL/ minute
Cryo (CO_2)	On
Quick Cryo Cooling	On
Initial Temperature	-10°C
Initial Temperature Hold Time	0.50 minute
1st Ramp Program	30°C/ minute
1st Temperature	130°C
1st Temperature Hold Time	0.50 minute
2nd Ramp Program	25°C/ minute
2nd Temperature	160°C
2nd Temperature Hold Time	0.50 minute
Total Run Time	7.36 minute

AGILENT® MS	
MS Temperatures	
MS Quadrupole	150°C
MS Ion Source	230°C
MS Transfer Line	220°C
MS Tune File	BFB.u
MS Acquisition Mode	SCAN/SIM
Solvent Delay	1.40 minute

TABLE 2 (continued)
Instrument Conditions for Analysis of Volatile Organic Compounds
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

SIMS Parameters	
Group 1 Start Time	1.40 min
Ions/Dwell in Group 1	(27/100) (62/100) (64/100)
Group 2 Start Time	2.61 min
Ions/Dwell in Group 2	(61/40) (63/40) (96/40)
Group 3 Start Time	3.30 min
Ions/Dwell in Group 3	(41/30) (53/30) (61/30) (73/30) (96/30) (98/30)
Group 4 Start Time	3.65 min
Ions/Dwell in Group 4	(27/40) (63/40) (65/40)
Group 5 Start Time	3.90 min
Ions/Dwell in Group 5	(61/40) (96/40) (98/40)
Group 6 Start Time	4.08 min
Ions/Dwell in Group 6	(49/40) (93/40) (128/40) (130/40)
Group 7 Start Time	4.21 min
Ions/Dwell in Group 7	(61/40) (97/40) (99/40)
Group 8 Start Time	4.42 min
Ions/Dwell in Group 8	(50/30) (63/30) (77/30) (78/30) (88/30) (114/30)
Group 9 Start Time	4.70 min
Ions/Dwell in Group 9	(95/40) (130/40) (132/40)
Group 10 Start Time	5.21 min
Ions/Dwell in Group 10	(91/40) (92/40)
Group 11 Start Time	5.65 min
Ions/Dwell in Group 11	(94/40) (131/40) (164/40) (166/40)
Group 12 Start Time	6.00 min
Ions/Dwell in Group 11	(82/30) (91/30) (105/30) (106/30) (117/30) (119/30)

TABLE 3
Concentrations and Quantitation Ions for Air Toxic Standards
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

Air Liquide, Custom Class Calibration Standard
Cylinder Number: CC-318001
Certification Date: 15 March 2012
Expiration Date: 15 March 2013

BFB Compound	Quant Ion	Concentration
4-Bromofluorobenzene	N/A	1.04 ppm

Spectra Gases, Inc. Special Certified Blend
Cylinder Number: CC-126554
Certification Date: 15 June 2011
Expiration Date: 15 June 2012

Volatile Organic Compound	Quant Ion	Concentration
Vinyl chloride	62	20.5 ppm
1,1-Dichloroethene	61	20.8 ppm
trans-1,2-Dichloroethene	61	21.6 ppm
1,1-Dichloroethane	63	20.8 ppm
Methyl tert-Butyl Ether	73	20.2 ppm
cis-1,2-Dichloroethene	61	21.4 ppm
1,1,1-Trichloroethane	97	19.7 ppm
Benzene	78	20.7 ppm
Trichloroethene	130	20.2 ppm
Toluene	91	20.5 ppm
Tetrachloroethene	166	20.3 ppm
Ethylbenzene	91	20.5 ppm
m-Xylene	91	10.3 ppm
p-Xylene	91	10.3 ppm
o-Xylene	91	20.6 ppm

Spectra Gases, Inc.
Cylinder Number: CC-270516
Certification Date: 01 November 2011
Expiration Date: 01 November 2012

Internal Standard	Quant Ion	Concentration
Bromochloromethane	49	0.97 ppm
1,4-Difluorobenzene	114	1.02 ppm
Chlorobenzene-d_5	117	1.05 ppm

TABLE 3 (continued)
Concentrations and Quantitation Ions for Air Toxic Standards
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

Spectra Gases, Inc. Special Certified Blend

Cylinder Number: CC-191851
Certification Date: June 23, 2011
Expiration Date: June 22, 2012

Volatile Organic Compound	Quant Ion	Concentration
Vinyl chloride	62	19.8 ppm
1,1-Dichloroethene	61	20.2 ppm
trans-1,2-Dichloroethene	61	20.8 ppm
1,1-Dichloroethane	63	20.5 ppm
Methyl tert-Butyl Ether	73	19.5 ppm
cis-1,2-Dichloroethene	61	20.5 ppm
1,1,1-Trichloroethane	97	19.1 ppm
Benzene	78	20.0 ppm
Trichloroethene	130	19.6 ppm
Toluene	91	19.7 ppm
Tetrachloroethene	166	19.6 ppm
Ethylbenzene	91	19.3 ppm
m-Xylene	91	9.7 ppm
p-Xylene	91	9.7 ppm
o-Xylene	91	19.2 ppm

TABLE #4
Results of Target Compounds for Volatile Organic Compounds in Sub-Slab Soil Gas Samples
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

Data File:	HEN015		HEN018		HEN020		HEN021	
Sample Number:	20120321-MB		51100		51101		51102	
Sample Location:	Method Blank		BLDG6-SS-01		BLDG6-SS-02		BLDG6-SS-03	
Sample Volume (ml):	5		5		5		5	
Dilution multiplier:	1		1		1		1	
Date Sampled:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Date Analyzed:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Compound	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
trans-1,2-Dichloroethene	U	0.54	U	0.54	U	0.54	0.66	0.54
cis-1,2-Dichloroethene	U	0.54	U	0.54	U	0.54	14	0.54
Trichloroethene	U	0.51	U	0.51	U	0.51	40	0.51
Tetrachloroethene	U	0.51	2.6	0.51	1.3	0.51	280	0.51

Data File:	HEN022		HEN023		HEN024		HEN025	
Sample Number:	51103		51104		51105		51106	
Sample Location:	BLDG6-SS-04		BLDG8-SS-01		BLDG8-SS-02		BLDG8-SS-03	
Sample Volume (ml):	5		5		5		5	
Dilution multiplier:	1		1		1		1	
Date Sampled:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Date Analyzed:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Compound	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
trans-1,2-Dichloroethene	U	0.54	U	0.54	U	0.54	U	0.54
cis-1,2-Dichloroethene	U	0.54	U	0.54	U	0.54	U	0.54
Trichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Tetrachloroethene	11	0.51	11	0.51	5.8	0.51	11	0.51

Results are in part per billion by volume (ppbv)
RL = Reporting Limit
U = None detected at or above the RL

TABLE #4 (continued)
Results of Target Compounds for Volatile Organic Compounds in Sub-Slab Soil Gas Samples
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

Data File:	HEN026		HEN030		HEN031		HEN032	
Sample Number:	51107		51108		51109		51110	
Sample Location:	BLDG H-SS-01		BLDG H-SS-02		BLDG H-SS-03		BLDG G-SS-01	
Sample Volume (ml):	5		5		5		5	
Dilution multiplier:	1		1		1		1	
Date Sampled:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Date Analyzed:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Compound	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.52	U	0.52	U	0.52	8.4	0.52
trans-1,2-Dichloroethene	0.71	0.54	0.90	0.54	6.2	0.54	13	0.54
cis-1,2-Dichloroethene	13	0.54	100	0.54	540	0.54	7700	0.54
Trichloroethene	76	0.51	81	0.51	76	0.51	1100	0.51
Tetrachloroethene	13000 D	5.1	4800	0.51	870	0.51	21000 D	5.1

Data File:	HEN034		HEN035		HEN036		HEN037	
Sample Number:	51111		51112		51113		51114	
Sample Location:	BLDG P1-SS-01		BLDG P1-SS-02		BLDG 3-SS-1-01		BLDG 3-SS-1-02	
Sample Volume (ml):	5		5		5		5	
Dilution multiplier:	1		1		1		1	
Date Sampled:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Date Analyzed:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Compound	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
trans-1,2-Dichloroethene	U	0.54	U	0.54	U	0.54	U	0.54
cis-1,2-Dichloroethene	U	0.54	U	0.54	U	0.54	U	0.54
Trichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Tetrachloroethene	53	0.51	330	0.51	0.60	0.51	U	0.51

Results are in part per billion by volume (ppbv)
RL = Reporting Limit
U = None detected at or above the RL
D = Result is from an analysis at a secondary dilution factor

TABLE #4 (continued)
Results of Target Compounds for Volatile Organic Compounds in Sub-Slab Soil Gas Samples
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

Data File:	HEN038		HEN039		HEN040		HEN041	
Sample Number:	51115		51116		51117		51118	
Sample Location:	BLDG 3-SS-1-03		BLDG 3-SS-2-01		BLDG 3-SS-2-02		BLDG 3-SS-2-03	
Sample Volume (ml):	5		5		5		5	
Dilution multiplier:	1		1		1		1	
Date Sampled:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Date Analyzed:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Compound	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
trans-1,2-Dichloroethene	U	0.54	U	0.54	U	0.54	U	0.54
cis-1,2-Dichloroethene	U	0.54	U	0.54	U	0.54	U	0.54
Trichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Tetrachloroethene	1.5	0.51	U	0.51	U	0.51	U	0.51

Data File:	HEN042		HEN043		HEN044		HEN045	
Sample Number:	51119		51120		51121		51122	
Sample Location:	BLDG 3-SS-2-04		BLDG P2-SS-01		BLDG P2-SS-02		BLDG P2-SS-03	
Sample Volume (ml):	5		5		5		5	
Dilution multiplier:	1		1		1		1	
Date Sampled:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Date Analyzed:	21 Mar 2012		21 Mar 2012		21 Mar 2012		21 Mar 2012	
Compound	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL	Conc. (ppbv)	RL
Vinyl Chloride	U	5.1	U	5.1	U	5.1	U	5.1
1,1-Dichloroethene	U	0.52	U	0.52	U	0.52	U	0.52
trans-1,2-Dichloroethene	U	0.54	U	0.54	U	0.54	U	0.54
cis-1,2-Dichloroethene	U	0.54	U	0.54	U	0.54	U	0.54
Trichloroethene	U	0.51	U	0.51	U	0.51	U	0.51
Tetrachloroethene	U	0.51	0.64	0.51	2.6	0.51	7.8	0.51

Results are in part per billion by volume (ppbv)
RL = Reporting Limit
U = None detected at or above the RL

TABLE #4 (continued)
Results of Target Compounds for Volatile Organic Compounds in Sub-Slab Soil Gas Samples
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

Data File:	HEN046
Sample Number:	51123
Sample Location:	BLDG P2-SS-04
Sample Volume (ml):	5
Dilution multiplier:	1
Date Sampled:	21 Mar 2012
Date Analyzed:	21 Mar 2012

Compound	Conc. (ppbv)	RL
Vinyl Chloride	U	5.1
1,1-Dichloroethene	U	0.52
trans-1,2-Dichloroethene	U	0.54
cis-1,2-Dichloroethene	U	0.54
Trichloroethene	U	0.51
Tetrachloroethene	3.6	0.51

Results are in part per billion by volume (ppbv)
RL = Reporting Limit
U = None detected at or above the RL

TABLE 5
Summary of Laboratory Control Samples for Volatile Organic Compounds
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

Data File:	20120321\HEN016.d
Sample Number:	20120321-LCS
Sample Location:	500 ppbv LCS
Sample Volume (ml):	5
Dilution multiplier:	1
Date Prepared:	21 Mar 2012
Date Analyzed:	21 Mar 2012

Compound	20120321-LCS Conc. (ppbv)	20120321-LCS Results Conc. (ppbv)	Lower Limits (ppbv)	Upper Limits (ppbv)	% Recovery
Vinyl Chloride	495	558	347	644	113
1,1-Dichloroethene	505	590	354	657	117
trans-1,2-Dichloroethene	520	575	364	676	111
cis-1,2-Dichloroethene	513	571	359	667	111
Trichloroethene	490	578	343	637	118
Tetrachloroethene	490	604	343	637	123

Data File:	20120321\HEN017.d
Sample Number:	20120321-LCS
Sample Location:	500 ppbv LCS
Sample Volume (ml):	5
Dilution multiplier:	1
Date Sampled:	21 Mar 2012
Date Analyzed:	21 Mar 2012

Compound	20120321-LCS Conc. (ppbv)	20120321-LCS Results Conc. (ppbv)	Lower Limits (ppbv)	Upper Limits (ppbv)	% Recovery
Vinyl Chloride	495	538	347	644	109
1,1-Dichloroethene	505	569	354	657	113
trans-1,2-Dichloroethene	520	543	364	676	104
cis-1,2-Dichloroethene	513	533	359	667	104
Trichloroethene	490	541	343	637	110
Tetrachloroethene	490	549	343	637	112

Results are in part per billion by volume (ppbv)

TABLE 5 (continued)
Summary of Laboratory Control Samples for Volatile Organic Compounds
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

Data File:	20120321\HEN047.d
Sample Number:	20120321-LCS
Sample Location:	500 ppbv LCS
Sample Volume (ml):	5
Dilution multiplier:	1
Date Sampled:	21 Mar 2012
Date Analyzed:	21 Mar 2012

Compound	20120321-LCS Conc. (ppbv)	20120321-LCS Results Conc. (ppbv)	Lower Limits (ppbv)	Upper Limits (ppbv)	% Recovery
Vinyl Chloride	495	550	347	644	111
1,1-Dichloroethene	505	581	354	657	115
trans-1,2-Dichloroethene	520	545	364	676	105
cis-1,2-Dichloroethene	513	530	359	667	103
Trichloroethene	490	542	343	637	111
Tetrachloroethene	490	551	343	637	112

Results are in part per billion by volume (ppbv)

TABLE 6
Replicate Sample Summary for Volatile Organic Compounds in Sub-Slab Soil Gas Samples
Henry's Dry Cleaners Site
Laconia, New Hampshire
March 2012

Data File:	20120321\HEN018.d	20120321\HEN019.d
Sample Number:	51100	51100
Sample Location:	BLDG6-SS-01	BLDG6-SS-01 RS
Sample Volume (ml):	5	5
Dilution multiplier:	1	1
Date Sampled:	21 Mar 2012	21 Mar 2012
Date Analyzed:	21 Mar 2012	21 Mar 2012

Compound	Conc. (ppbv)	Conc. (ppbv)	RPD (%)
Vinyl Chloride	U	U	NC
1,1-Dichloroethene	U	U	NC
trans-1,2-Dichloroethene	U	U	NC
cis-1,2-Dichloroethene	U	U	NC
Trichloroethene	U	U	NC
Tetrachloroethene	2.64	2.64	0

Results are in part per billion by volume (ppbv)
RS = Replicate Sample
U = Not detected above the Reporting Limit (RL)
NC = Not Calculable
RPD = Relative Percent Difference

APPENDIX A

Chain of Custody Records

Henry's Dry Cleaners Site
Laconia, New Hampshire

GC/MS Analytical Report

March 2012

REAC, Edison, NJ
(732) 321-4200
EPA Contract 68-C99-223

CHAIN OF CUSTODY RECORD

Project Name: HENRY Dry cleaner Site
Project Number: 0-167
LM Contact: S. Thompson Phone: 732-321-4200

No: 07320
Sheet **01** of **01** (Do not copy)
(for addnl. samples use new form)

Sample Identification | **Analyses Requested**

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Loop				
	51100	BLDG6-SS-01	SS	03/21/12	1	TEDLAR BAGS	GC/MS				
	51101	BLDG6-SS-02									
	51102	BLDG6-SS-03									
	51103	BLDG6-SS-04									
	51104	BLDG8-SS-01									
	51105	BLDG8-SS-02									
	51106	BLDG8-SS-03									
	51107	BLDG H-SS-01									
	51108	BLDG H-SS-02									
	51109	BLDG H-SS-03									
	51110	BLDG G-SS-01									
	51111	BLDG P1-SS-01									
	51112	BLDG P1-SS-02									
	51113	BLDG 3-SS-1-01									
	51114	BLDG 3-SS-1-02									
	51115	BLDG 3-SS-1-03									
	51116	BLDG3-SS-2-01									
	51117	BLDG3-SS-2-02									
	51118	BLDG3-SS-2-03									

Matrix:

A- Air
AT-Animal Tissue
DL- Drum Liquids
DS- Drum Solids
GW- Groundwater
O- Oil
PR-Product
PT-Plant Tissue
PW- Potable Water
S- Soil
SD- Sediment
SL- Sludge
SW- Surface Water
TX-TCLP Extract
W- Water
X- Other

Special Instructions:
SS = Sub-slab Soil Gas

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #:

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
ANALYSIS	[signature]	3/21/12	Scott Thompson	3/21/12	ALL DAY						

REAC, Edison, NJ
(732) 321-4200
EPA Contract 68-C99-223

CHAIN OF CUSTODY RECORD

Project Name: HENRY'S Dry CLEANERS SITE
Project Number: 0-167
LM Contact: S. Thompson Phone: 732-321-4200

No: 07321
Sheet 01 of 01 (Do not copy)
(for addnl. samples use new form)

Sample Identification | **Analyses Requested**

REAC#	Sample No	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Loop GC/MS				
	51119	BLDG 3-SS-2-04	SS ~~AIR~~	03/21/12	1	Tedlar Bag	GC/MS				
	51120	BLDG P2-SS-01									
	51121	BLDG P2-SS-02									
	51122	BLDG P2-SS-03									
	51123	BLDG P2-SS-04									

Matrix:

A- Air
AT-Animal Tissue
DL- Drum Liquids
DS- Drum Solids
GW- Groundwater
O- Oil
PR-Product
PT-Plant Tissue
PW- Potable Water
S- Soil
SD- Sediment
SL- Sludge
SW- Surface Water
TX-TCLP Extract
W- Water
X- Other

Special Instructions:

SS = Sub-SLAB SOIL GAS

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #:

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
ANALYSIS	[signature]	3/21/12	[signature]	3/21/12	HCL DAY						

☆ U.S. GPO: 2000-521-151

APPENDIX B

Certificates of Analysis

Henry's Dry Cleaners Site
Laconia, New Hampshire

GC/MS Analytical Report

March 2012

ISO 9001:2008 Linde **SPECTRA** Environmental Gases, 80 Industrial Drive, Alpha, NJ 08865

THE LINDE GROUP

Linde

SHIPPED TO: Lockheed Martin
2890 Woodbridge Ave.
Edison, NJ 08837

PAGE: 1 of 1

RUG0012

CERTIFICATE OF ANALYSIS

Sales#:	108727932	**Cylinder Size:**	2A (8" X 47.5")
Production#:	2801840	**Cylinder # :**	CC-318001
Certification Date:	Mar-15-2012	**Cylinder Pressure:**	1500 psig
P.O.# :	Verbal-Ben	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	14004551	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	3000 Liter
Expiration Date:	Mar-15-2013	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
4-Bromofluorobenzene	460-00-4	1.00 ppm	1.04 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Lou Lorenzetti

DATE: Mar-15-2012

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

ISO 9001:2008 Linde **SPECTRA** Environmental Gases, 80 Industrial Drive, Alpha, NJ 08865

THE LINDE GROUP

Linde

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2890 Woodbridge Ave
Edison, NJ 08837

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	108504469	**Cylinder Size:**	2A (8" X 47.5")
Production#:	1196814	**Cylinder # :**	CC-270516
Certification Date:	Nov-01-2011	**Cylinder Pressure:**	2000 psig
P.O.# :	CCBEAUCHAINE20111020	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	24088165	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	4000 Liter
Expiration Date:	Nov-01-2012	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Bromochloromethane	74-97-5	1.00 ppm	0.97 ppm
1,4-Difluorobenzene	540-36-3	1.00 ppm	1.02 ppm
Chlorobenzene-d5	3114-55-4	1.00 ppm	1.05 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Matthew Booth

DATE: Nov-01-2011

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
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Edison, NJ 08837

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	108191202	**Cylinder Size:**	2A (8" X 47.5")
Production#:	1181675	**Cylinder # :**	CC-126554
Certification Date:	Jun-15-2011	**Cylinder Pressure:**	700 psig
P.O.# :	CC-CHARLES SHIELDS	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	24086386	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	1400 Liter
Expiration Date:	Jun-15-2012	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Vinyl Chloride	75-01-4	20.0 ppm	20.5 ppm
1,1-Dichloroethene	75-35-4	20.0 ppm	20.8 ppm
Trans-1,2-Dichloroethylene	156-60-5	20.0 ppm	21.6 ppm
1,1-Dichloroethane	75-34-3	20.0 ppm	20.8 ppm
Methyl Tert-Butyl Ether	1634-04-4	20.0 ppm	20.2 ppm
Cis-1,2-Dichloroethylene	156-59-2	20.0 ppm	21.4 ppm
1,1,1-Trichloroethane	71-55-6	20.0 ppm	19.7 ppm
Benzene	71-43-2	20.0 ppm	20.7 ppm
Trichloroethylene	79-01-6	20.0 ppm	20.2 ppm
Toluene	108-88-3	20.0 ppm	20.5 ppm
Tetrachloroethylene	127-18-4	20.0 ppm	20.3 ppm
Ethylbenzene	100-41-4	20.0 ppm	20.5 ppm
p-xylene	106-42-3	10.0 ppm	10.3 ppm
m-xylene	108-38-3	10.0 ppm	10.3 ppm
o-xylene	95-47-6	20.0 ppm	20.6 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Matthew Booth

DATE: Jun-15-2011

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

ISO 9001:2008 Linde SPECTRA Environmental Gases, 80 Industrial Drive, Alpha, NJ 08865

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Environmental Services
2890 Woodbridge Ave
Edison, NJ 08837

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	108210068	**Cylinder Size:**	2A (8" X 47.5")
Production#:	1182551	**Cylinder # :**	CC-191851
Certification Date:	Jun-23-2011	**Cylinder Pressure:**	700 psig
P.O.# :	CC-Charles Shields	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	24086386	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	1400 Liter
Expiration Date:	Jun-22-2012	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Vinyl Chloride	75-01-4	20.0 ppm	19.8 ppm
1,1-Dichloroethene	75-35-4	20.0 ppm	20.2 ppm
Trans-1,2-Dichloroethylene	156-60-5	20.0 ppm	20.8 ppm
1,1-Dichloroethane	75-34-3	20.0 ppm	20.5 ppm
Methyl Tert-Butyl Ether	1634-04-4	20.0 ppm	19.5 ppm
Cis-1,2-Dichloroethylene	156-59-2	20.0 ppm	20.5 ppm
1,1,1-Trichloroethane	71-55-6	20.0 ppm	19.1 ppm
Benzene	71-43-2	20.0 ppm	20.0 ppm
Trichloroethylene	79-01-6	20.0 ppm	19.6 ppm
Toluene	108-88-3	20.0 ppm	19.7 ppm
Tetrachloroethylene	127-18-4	20.0 ppm	19.6 ppm
Ethylbenzene	100-41-4	20.0 ppm	19.3 ppm
p-xylene	106-42-3	10.0 ppm	9.7 ppm
m-xylene	108-38-3	10.0 ppm	9.7 ppm
o-xylene	95-47-6	20.0 ppm	19.2 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Matthew Booth

DATE: Jun-23-2011

Linde Gas North America LLC

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www.Lindeus.com

APPENDIX C

Calibration Data

Henry's Dry Cleaners Site
Laconia, New Hampshire

GC/MS Analytical Report

March 2012

03/16/12

- Reviewed MS Tune w/ GC oven @ 125°C - Printed Report
- Checked for Air & Water - Printed Report
- Prepared ICAL STANDARDS / ICV STD / MB / LCS using HZA in Tedlar Bags

- STD20120316-1 10 ppmv ICAL STD
  500 mL - 1° STD cc# 126554 (20ppmv)
  500 mL - HZA

- STD20120316-2 2 ppmv ICAL STD
  100 mL - 1° STD - cc# 126554 (20ppmv)
  900 mL - HZA

- STD20120316-3 500 ppbv ICAL STD
  50 mL - STD20120316-1 (10ppmv)
  950 mL - HZA

- STD20120316-4 100 ppbv ICAL STD
  50 mL - STD20120316 (2 ppmv)
  950 mL - HZA

- STD20120316-5 5 ppbv ICAL STD
  10 mL - STD20120316-3 (500ppbv)
  990 mL - HZA

- STD20120316-6 0.5 ppbv ICAL STD
  100 mL - STD20120316-5 (5 ppbv)
  900 mL - HZA

- STD20120316-7 500 ppbv ICV STD
  25 mL - 2° STD - cc# ~~126554~~ 3/16/12
  975 mL - HZA 191851

- 20120316-MB Method Blank
  1000 mL - HZA

- 20120316-LCS 500 ppbv LCS
  25 mL - 2° STD - cc# 191851
  975 mL - HZA

- Created Data Location O:\msdchem\1\data\2012\20120316\xxx.d
- Loaded: LoopBFB.M

HEN001.d	BFB	\	1 ppmv STD	\	5 mL	PASS	ok
002	BFB	\	↓	\	↓	PASS	ok
003	BFB	\		\		PASS	ok

- Loaded GC/MS Method Loop20120215.M → Saved As Loop20120316.M
- Loaded Envirо Quant Method Loop20120215-Quant.m
  Saved As Loop20120316-Quant.m

Continued on Page 30

Read and Understood By

Scott J. Thompson 03/16/12
Signed Date Signed Date

03/16/12 (con't)

HEN004.d	STD20120316-1	10ppmv FCAL STD	5mL		PASS	Loop20120316-QUANT.M	ok
HEN005	STD20120316-2	2 ppmv FCAL STD	5mL				ok
006	STD20120316-3	500ppbv FCAL STD	5mL				ok
007	STD20120316-4	100ppbv FCAL STD	5mL				ok
008	STD20120316-5	5 ppbv FCAL STD	5mL				ok
009	STD20120316-6	0.5ppbv FCAL STD	5mL				ok
010	STD20120316-7	500ppbv ICV STD	5mL		PASS		ok
011	20120316-MB	method BLANK	5mL				ok
012	20120316-LCS	500ppbv LCS	5mL		PASS		ok

- Printed Internal STD Report - ok
- Stored GC oven @ 125°C
- Changed Time Ahead by 1 hour on computer

JP 03/16/12 End

03/21/12 Henry's Dry Cleaners Site WA# 0-167

- Reviewed MS Tune w/ GC oven @ 125 - ok Printed Report
- Checked for Air & Water - ok Printed Report
- Prepared CCV / MB / LCS using HZA in TedLar Bags

STD20120321-1 500ppbv CCV	20120321-MB	20120321-LCS 500ppbv LCS
25mL-1° STD cc#126554 (20ppmv)	method BLANK	25mL-2° STD cc# 141851
975mL-HZA	1000mL-HZA	975 - HZA

- GC/MS methods used: Loop BFB.M & Loop 20120316.M
- EnviroQuant Method: Loop 20120316 - QUANT.M
- Created Data Location: D:\msdchem\1\data\2012\20120321\HENXXX.d

~~HEN001.d~~ JP 3/21/12

HEN003.d	BFB	1ppmv STD	5mL	PASS	ok
HEN004.d	STD20120321-1	500ppbv CCV	5mL	PASS	ok
HEN005.d 3/21/12	20120321-MB	method BLANK	5mL		ok
HEN006.d	20120321-LCS	500ppbv LCS	5mL	PASS	ok
HEN007.d	20120321-LCS	500ppbv LCS	5mL	PASS	ok
HEN008.d	51100	B10GG-SS-01	5mL		ok
HEN009.d	51100	B10GG-SS-01 RS	5mL		ok

Continued on Page 31

RS = Replicate Sample

Read and Understood By

Scott J. Thompson 03/21/12
Signed Date Signed Date

03/21/12 con't

HEN020.d	51101	BLDG6-SS-02	5mL						ok
HEN021.d	51102	BLDG 6-SS-03	5mL						ok
HEN022.d	51103	BLDG 6-SS-04	5mL						ok
HEN023.d	51104	BLDG 8-SS-01	5mL						ok
HEN024.d	51105	BLDG8-SS-02	5mL						ok
HEN025.d	51106	BLDG8-SS-03	5mL						ok
HEN026.d	51107	BLDG H-SS-01	5mL			RR @ 10X			ok
HEN027.d	51107	BLDG H-SS-01	5mL	10X					ok
HEN028.d	51108	BLDG H-SS-02	5mL	10X		RR @ 1X	DNU		ok
HEN029.d	51109	BLDG H-SS-03	5mL	10X		RR @ 1X	DNU		ok
HEN030.d	51108	BLDG H-SS-02	5mL						ok
HEN031.d	51109	BLDG H-SS-03	5mL						ok
HEN032.d	51110	BLDG G-SS-01	5mL			RR @ 10X			ok
HEN033.d	51110	BLDG G-SS-01	5mL	10X					ok
HEN034.d	51111	BLDG P1-SS-01	5mL						ok
HEN035.d	51112	BLDG P1-SS-02	5mL						ok
HEN036.d	51113	BLDG 3-SS-1-01 @ 03/21/12	5mL						ok
HEN037.d	51114	BLDG 3-SS-1-02	5mL						ok
HEN038.d	51115	BLDG 3-SS-1-03	5mL						ok
HEN039.d	51116	BLDG 3-SS-2-01	5mL						ok
HEN040.d	51117	BLDG 3-SS-2-02	5mL						ok
HEN041.d	51118	BLDG 3-SS-2-03	5mL						ok
HEN042.d	51119	BLDG 3-SS-2-04	5mL						ok
HEN043.d	51120	BLDG P2-SS-01 3/21/12	5mL						ok
HEN044.d	51121	BLDG P2-SS-02	5mL						ok
HEN045.d	51122	BLDG P2-SS-03	5mL						ok
HEN046.d	51123	BLDG P2-SS-04	5mL						ok
HEN047.d	20120321-LCS	500 ppbv LCS	5mL					PASS	ok

- Printed Int STD Report
- Stored GC oven @ 125°C

03/21/12

Continued on Page End

DNU : Do Not Use

Read and Understood By

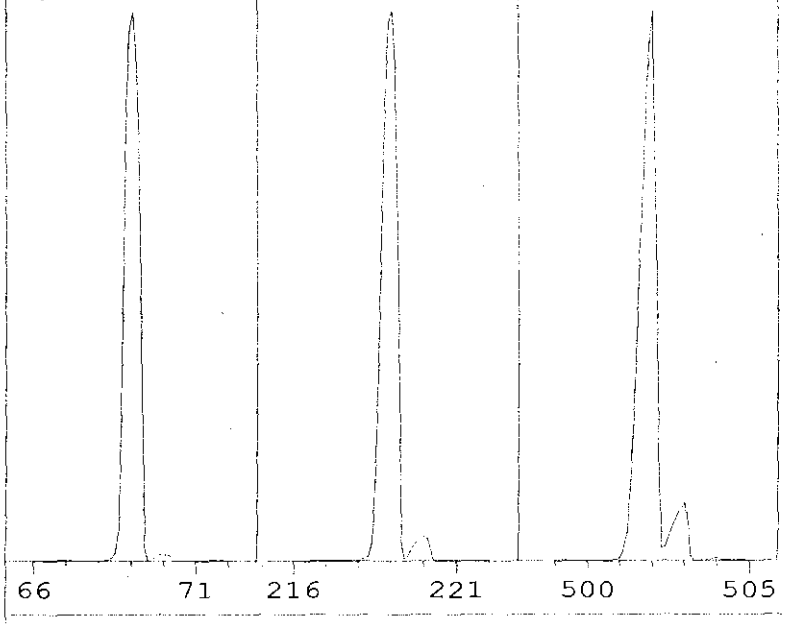
Scott J. Thompson 03/21/12

Signed Date Signed Date

5975

Fri Mar 16 12:59:25 2012 Instrument: Instrument 2
C:\msdchem\1\5975\bfb.u US83130668

Mass	69.00	Mass	219.00	Mass	502.00
Ab	717230	Ab	467586	Ab	29512
Pw50	0.55	Pw50	0.55	Pw50	0.57

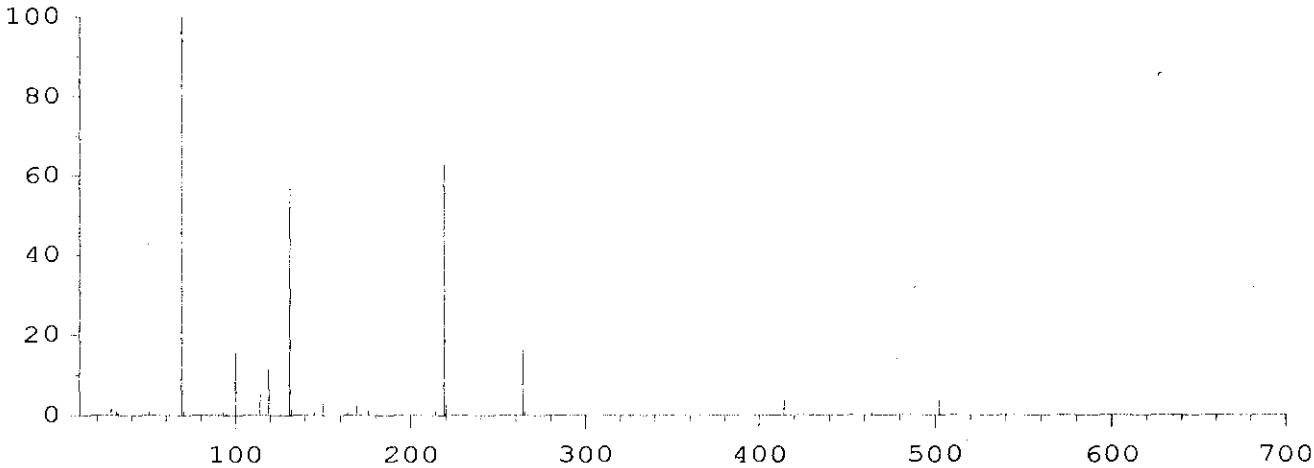


Ion Pol	Pos	MassGain	-978
		MassOffs	-39
Emission	34.6	AmuGain	1152
EIEnrgy	69.9	AmuOffs	126.25
Filament	2	Wid219	-0.016
		DC Pol	Pos
Repeller	19.90		
IonFcus	71.2	HEDEnab	On
EntLens	0.0	EMVolts	1353
EntOffs	Var		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.56e05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
110 peaks Base: 69.00 Abundance: 698560



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	698560	100.00	70.00	7510	1.08
219.00	438272	62.74	220.00	18376	4.19
502.00	26160	3.74	502.90	2658	10.16

Air/Water Check: H2O~0.15% N2~1.91% O2~0.54% CO2~0.12% N2/H2O~1273.71%

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 165742
Repeller Maximum 20 volts using ion 219; Gain Factor 1.66

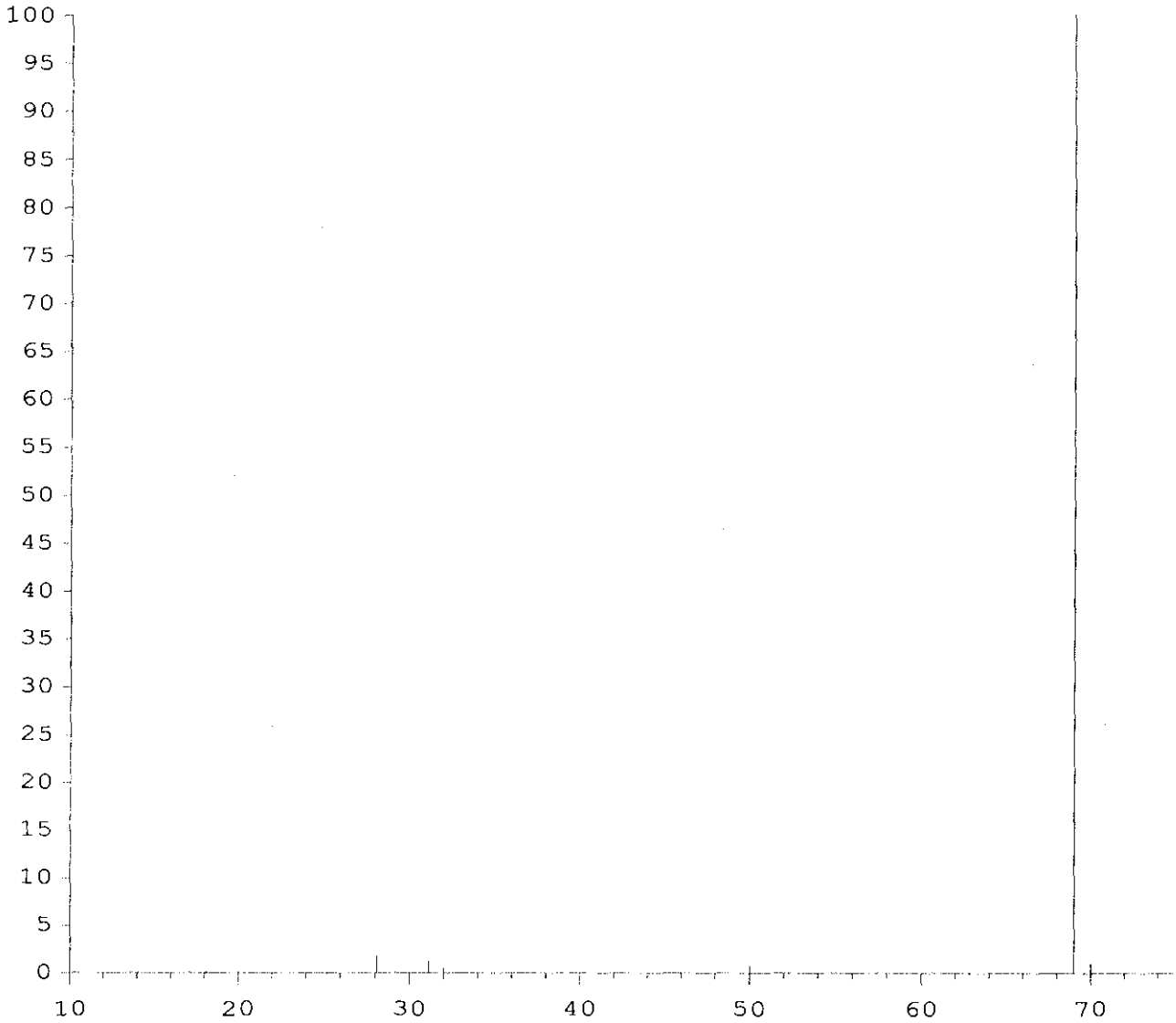
MassGain Values(Samples): -965(3) -953(2) -927(1) -873(0) -795(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	126.3	126.3	126.3	126.3	126.3	126.3	126.3
Entrance Lens Offset:	15.3	12.5	13.3	13.6	14.8	16.1	16.1
Target Abund(%):	1.0	100.0	52.0	50.0	2.4	2.0	
Actual Tune Abund(%):	0.9	100.0	56.9	62.7	3.9	3.7	

597x Air and Water Check

Instrument: Instrument 2
Fri Mar 16 13:00:08 2012 C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
71 peaks Base: 69.00 Abundance: 705984



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	705984	100.00	70.00	7292	1.03
18.10	1071	0.15	19.10	177	16.53
28.10	12947	1.83	28.90	110	0.85

Current Params used: bfb.u

Relative abundances:

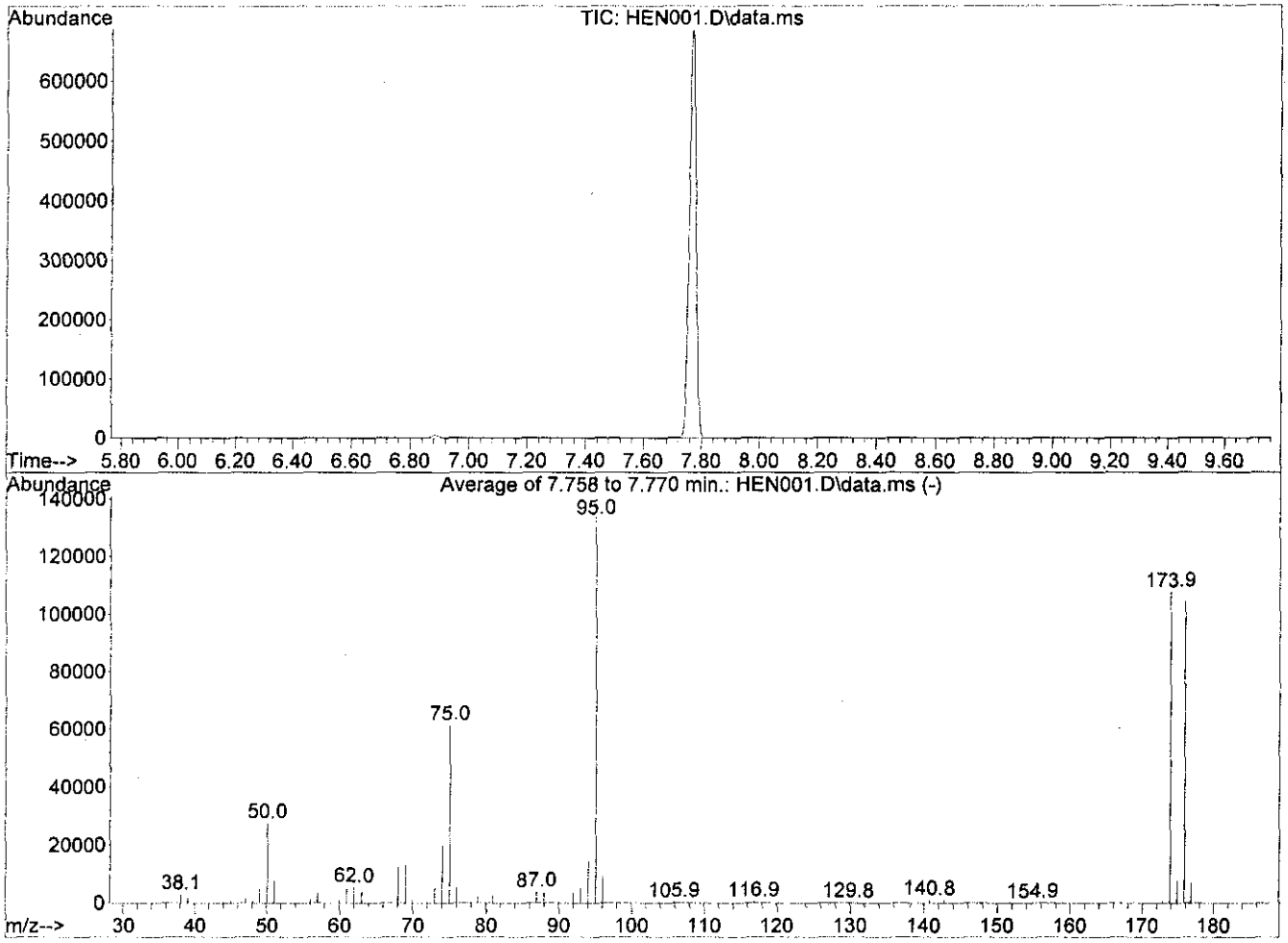
18/69 =	0.15	Water%	(counts=1071)
28/69 =	1.83	Nitrogen%	(counts=12947)
32/69 =	0.58	Oxygen%	(counts=4113)
44/69 =	0.09	Carbon Dioxide%	(counts=646)
28/18 =	1208.87	Nitrogen/Water%	

BFB

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN001.D
Acq On : 16 Mar 2012 13:11
Operator : SJT
Sample : BFB \ 1ppmv STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20120215-Quant.m
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Feb 15 11:31
Last Update : Tue Mar 13 08:27:33 2012



AutoFind: Scans 650, 651, 652; Background Corrected with Scan 643

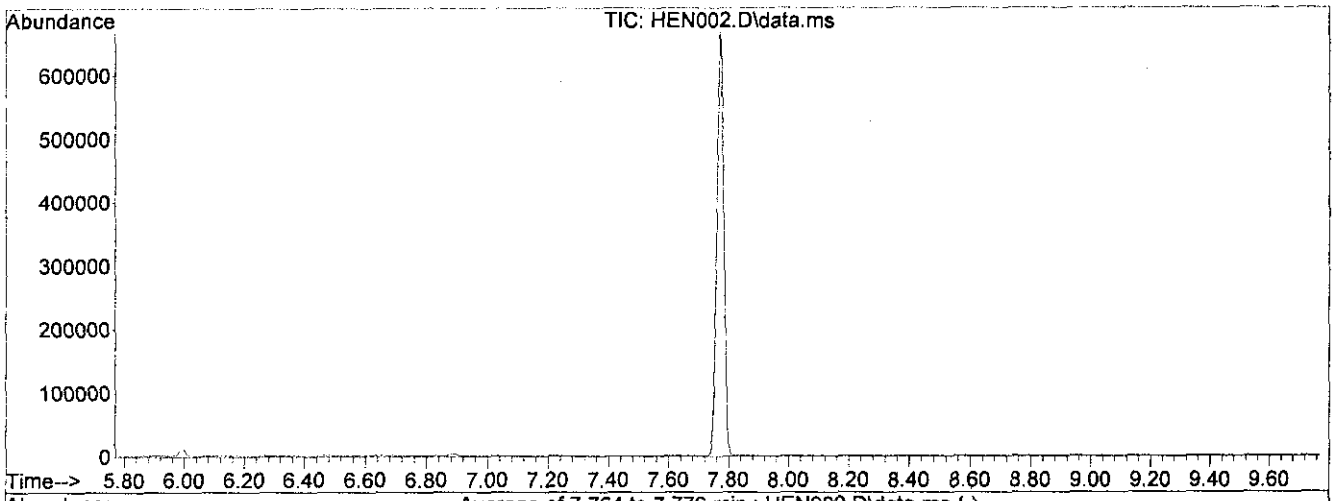
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	20.6	27629	PASS
75	95	30	66	45.8	61512	PASS
95	95	100	100	100.0	134275	PASS
96	95	5	9	6.7	9016	PASS
173	174	0.00	2	0.7	732	PASS
174	95	50	120	80.2	107688	PASS
175	174	4	9	7.2	7722	PASS
176	174	93	101	97.0	104488	PASS
177	176	5	9	6.7	6958	PASS

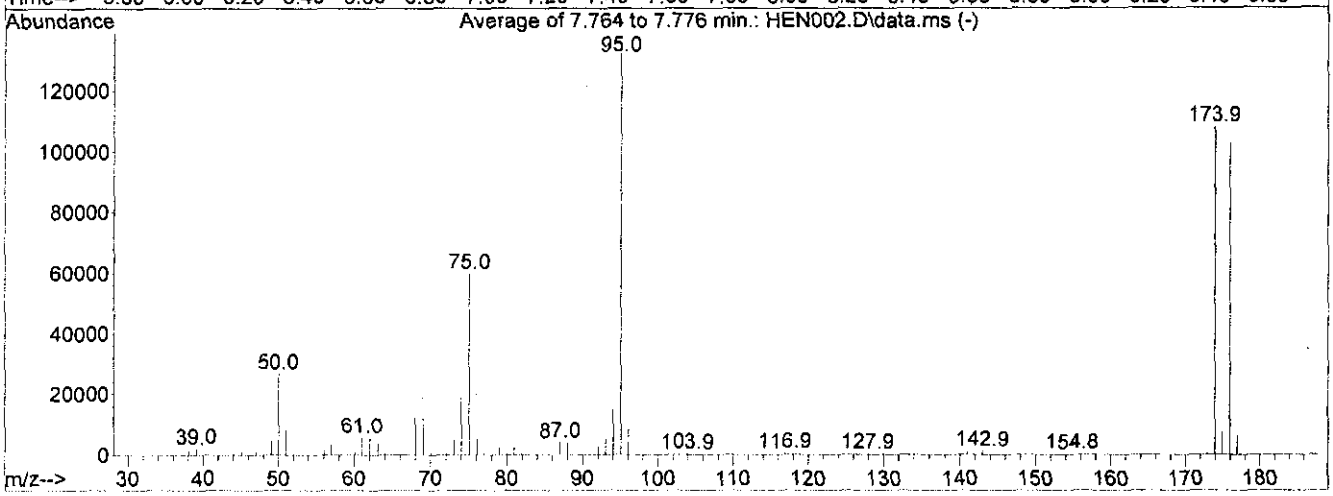
BFB

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN002.D
Acq On : 16 Mar 2012 13:30
Operator : SJT
Sample : BFB \ 1ppmv STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20120215-Quant.m
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Feb 15 11:31
Last Update : Tue Mar 13 08:27:33 2012





AutoFind: Scans 651, 652, 653; Background Corrected with Scan 643

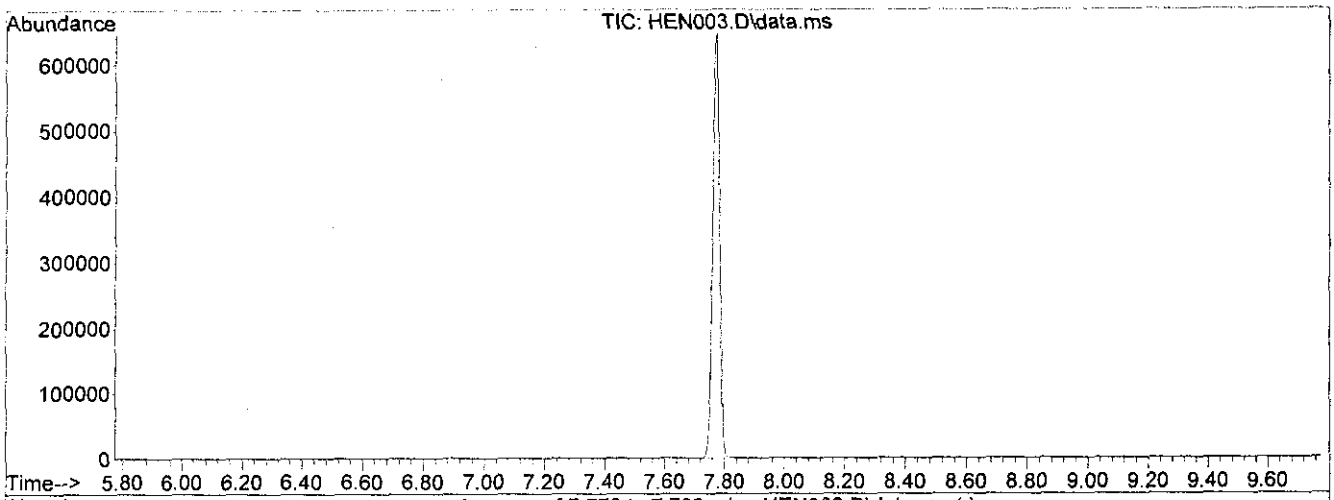
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	20.3	26829	PASS
75	95	30	66	45.3	59973	PASS
95	95	100	100	100.0	132445	PASS
96	95	5	9	6.5	8591	PASS
173	174	0.00	2	0.5	576	PASS
174	95	50	120	81.6	108019	PASS
175	174	4	9	7.1	7712	PASS
176	174	93	101	95.3	102896	PASS
177	176	5	9	6.9	7058	PASS

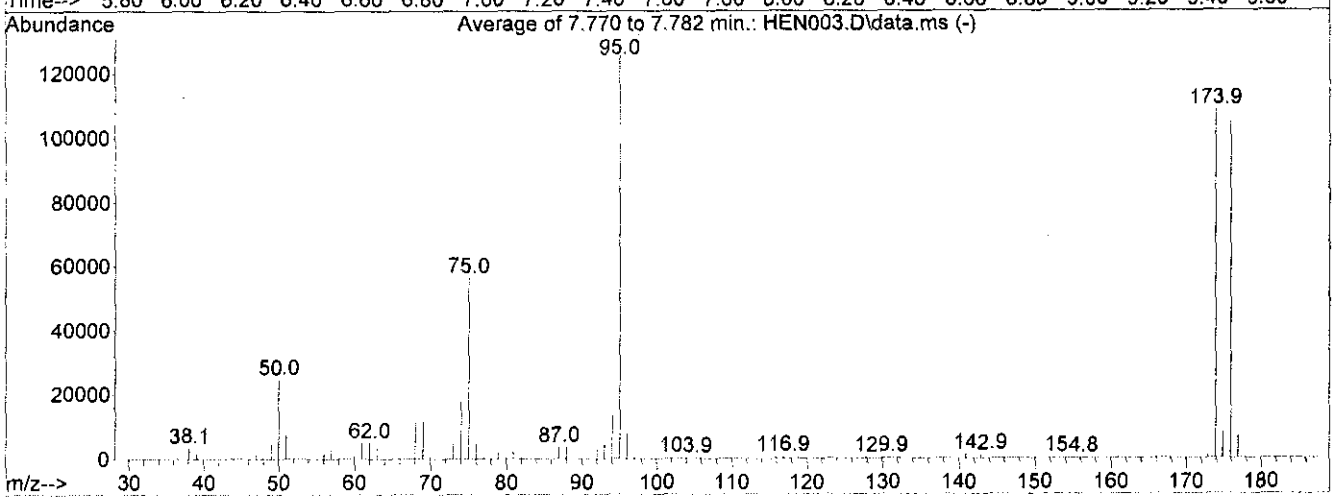
BFB

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN003.D
Acq On : 16 Mar 2012 13:46
Operator : SJT
Sample : BFB \ 1ppmv STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20120215-Quant.m
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Feb 15 11:31
Last Update : Tue Mar 13 08:27:33 2012





AutoFind: Scans 652, 653, 654; Background Corrected with Scan 644

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.7	24693	PASS
75	95	30	66	44.9	56312	PASS
95	95	100	100	100.0	125376	PASS
96	95	5	9	6.3	7909	PASS
173	174	0.00	2	0.6	690	PASS
174	95	50	120	86.4	108357	PASS
175	174	4	9	7.2	7825	PASS
176	174	93	101	96.8	104843	PASS
177	176	5	9	6.7	7007	PASS

Response Factor Report Instrument 2

Method Path : C:\msdchem\1\METHODS\
Method File : LOOP20120316-Quant.m
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:37:46 2012
Last Update : Fri Mar 16 15:37:46 2012
Response Via : Initial Calibration

Calibration Files
500 =HEN006.D 10K =HEN004.D 2K =HEN005.D 100 =HEN007.D 5 =HEN008.D
0.5 =HEN009.D

	Compound	500	10K	2K	100	5	0.5	Avg	%RSD
1)	ISTDBromochloromethane	----------ISTD----------							
2)	Vinyl Chloride	0.391	0.466	0.454	0.432	0.343		0.418	12.05
3)	1,1-Dichloroet...	0.744	0.856	0.847	0.805	0.662	0.604	0.753	13.62
4)	Methyl Tert Bu...	1.091	1.270	1.260	1.166	0.943	0.985	1.119	12.29
5)	trans-1,2-Dich...	0.653	0.734	0.738	0.706	0.595	0.604	0.672	9.47
6)	1,1-Dichloroet...	0.787	0.892	0.895	0.845	0.696	0.651	0.794	12.90
7)	cis-1,2-Dichlo...	0.621	0.689	0.700	0.679	0.544	0.617	0.642	9.23
8)	1,1,1-Trichlor...	1.065	1.215	1.216	1.134	0.918	0.878	1.071	13.63
9)	ISTD1,4-Difluorobenzene	----------ISTD----------							
10)	Benzene	0.490	0.546	0.546	0.523	0.434	0.513	0.509	8.31
11)	Trichloroethene	0.266	0.302	0.298	0.284	0.224	0.242	0.269	11.69
12)	ISTDChlorobenzene-d5	----------ISTD----------							
13)	Toluene	0.592	0.653	0.658	0.621	0.508	0.664	0.616	9.65
14)	Tetrachloroethene	0.330	0.378	0.366	0.343	0.268	0.289	0.329	13.11
15)	Ethyl Benzene	0.782	0.866	0.873	0.786	0.615	0.887	0.801	12.73
16)	m,p-Xylene	0.573	0.644	0.642	0.582	0.475	0.797	0.619	17.25
17)	o-Xylene	0.596	0.666	0.667	0.599	0.476	0.746	0.625	14.63

) = Out of Range

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN004.D
Acq On : 16 Mar 2012 14:18
Operator : SJT
Sample : STD20120316-1 \ 10ppmv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 14:32:52 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 14:31:35 2012
Response via : Initial Calibration

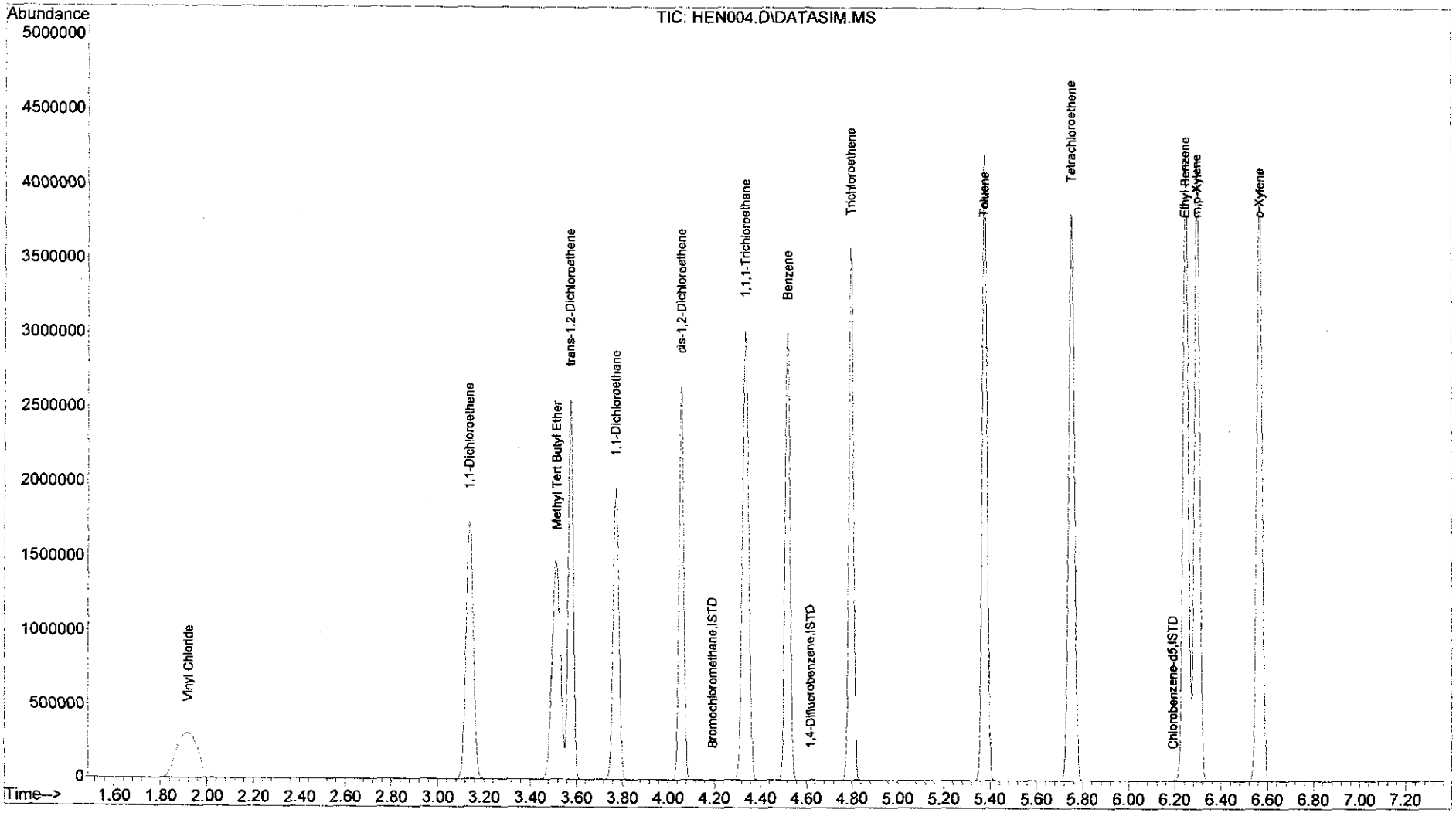
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.192	49	2348	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5532	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.192	117	5811	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Vinyl Chloride	1.919	62	1122637	10644.20 ppbv	97
3) 1,1-Dichloroethene	3.136	61	2089733	10918.08 ppbv	99
4) Methyl Tert Butyl Ether	3.515	73	3012041	10415.99 ppbv	95
5) trans-1,2-Dichloroethene	3.575	61	1861421	10949.67 ppbv	98
6) 1,1-Dichloroethane	3.772	63	2178633	10435.71 ppbv	98
7) cis-1,2-Dichloroethene	4.059	61	1731281	10560.97 ppbv	98
8) 1,1,1-Trichloroethane	4.336	97	2809503	10079.41 ppbv	98
10) Benzene	4.521	78	3126074	10509.06 ppbv	100
11) Trichloroethene	4.796	130	1689338	10151.80 ppbv	97
13) Toluene	5.377	91	3889415	9714.32 ppbv	99
14) Tetrachloroethene	5.752	166	2228131	10531.09 ppbv	99
15) Ethyl Benzene	6.247	91	5158142	10046.73 ppbv	99
16) m,p-Xylene	6.296	91	3856708	9692.67 ppbv	99
17) o-Xylene	6.568	91	3987953	9580.09 ppbv	99

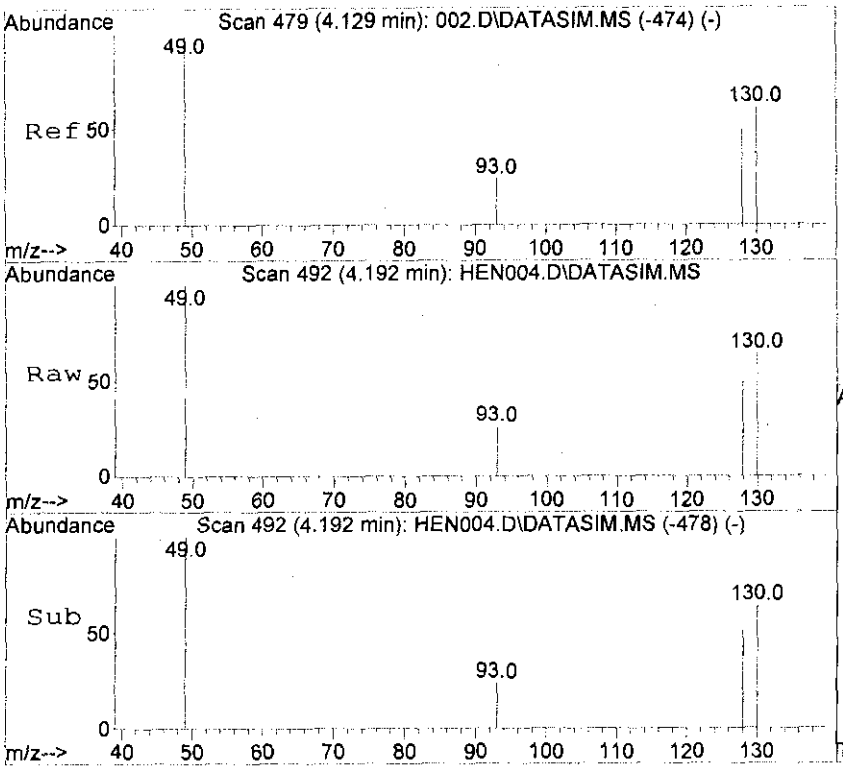
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN004.D
Acq On : 16 Mar 2012 14:18
Operator : SJT
Sample : STD20120316-1 \ 10ppmv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 14:32:52 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 14:31:35 2012
Response via : Initial Calibration

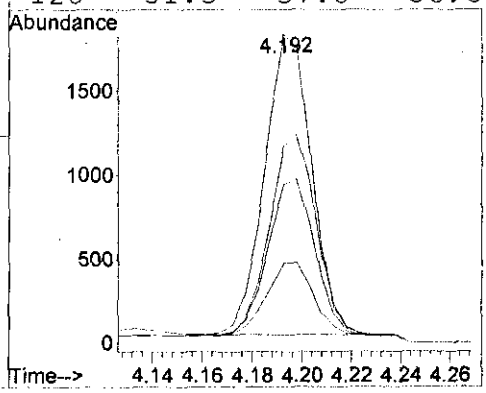


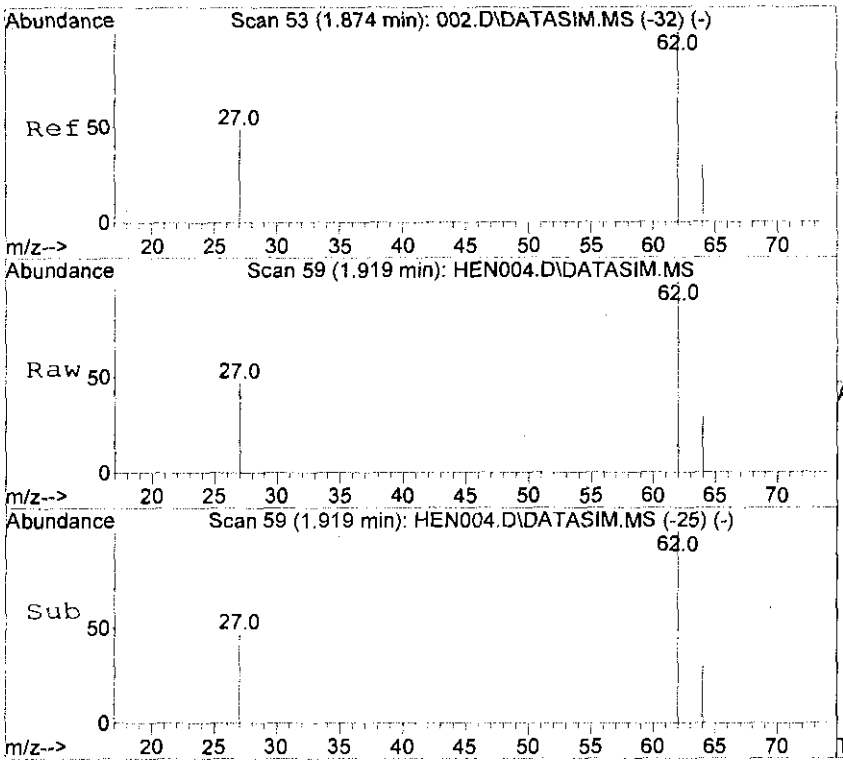


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 49 Resp: 2348

Ion	Ratio	Lower	Upper
49	100		
130	63.6	46.5	69.7
93	26.0	19.0	28.6
128	51.3	37.8	56.6

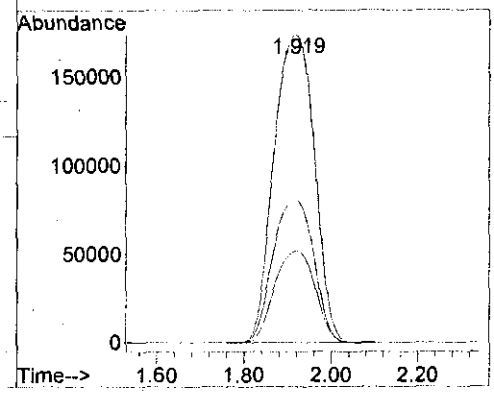


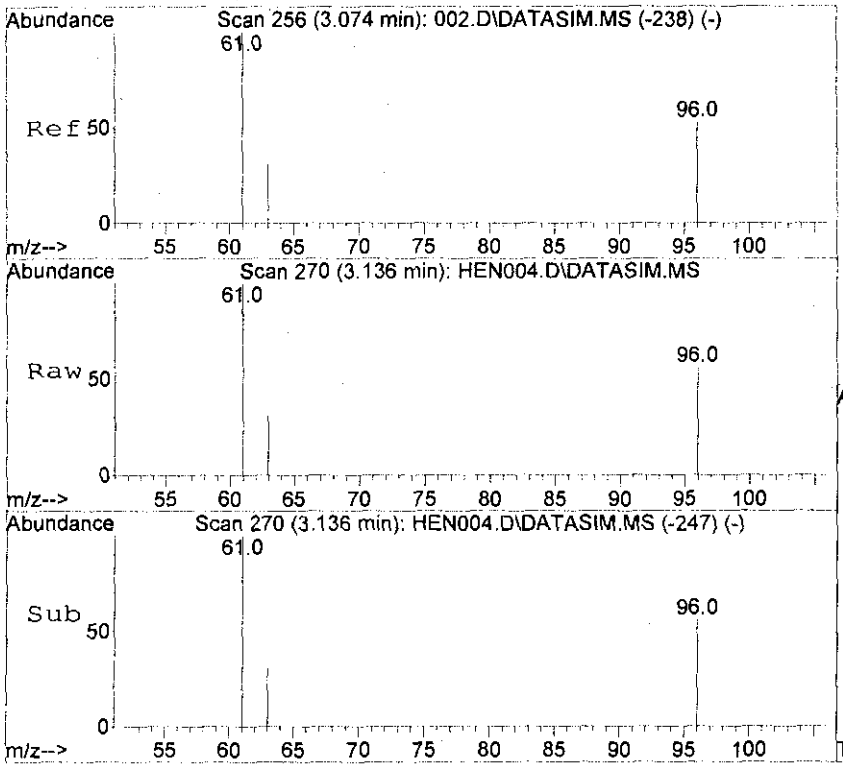


#2
Vinyl Chloride
Concen: 10644.20 ppbv
RT: 1.919 min Scan# 59
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 62 Resp: 1122637

Ion	Ratio	Lower	Upper
62	100		
64	29.6	23.7	35.5
27	46.6	39.8	59.8

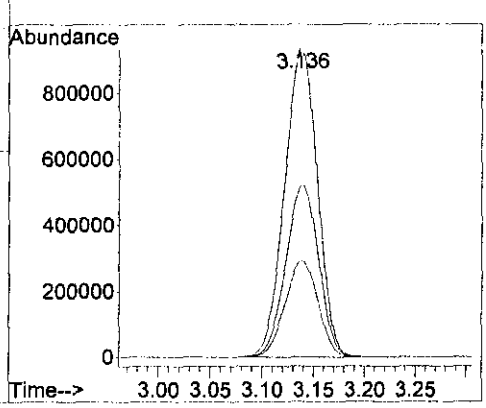


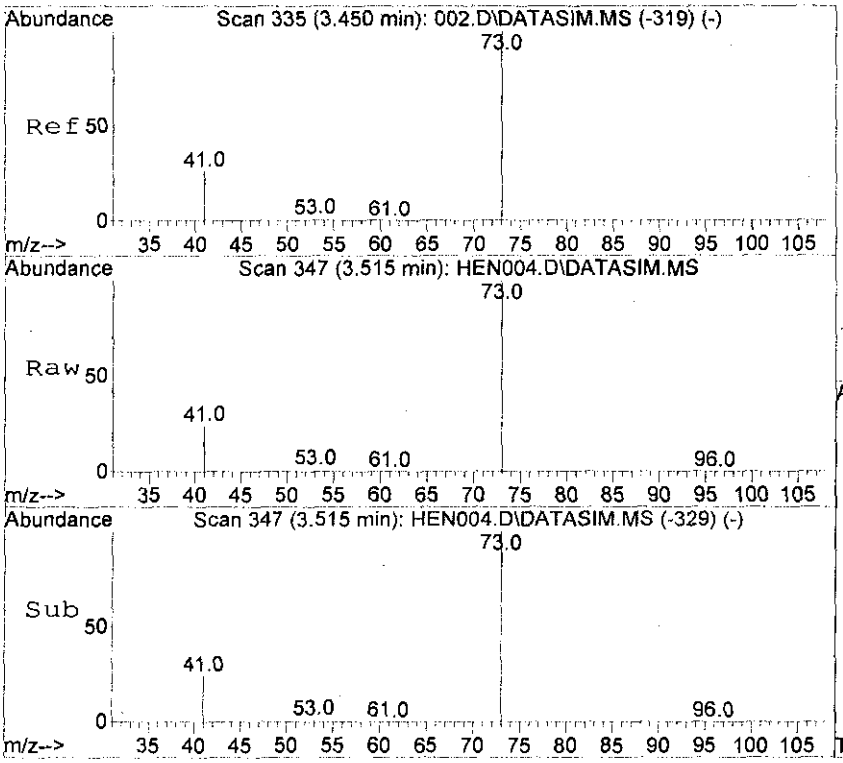


#3
1,1-Dichloroethene
Concen: 10918.08 ppbv
RT: 3.136 min Scan# 270
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 61 Resp: 2089733

Ion	Ratio	Lower	Upper
61	100		
96	55.8	43.8	65.6
63	31.4	25.1	37.7

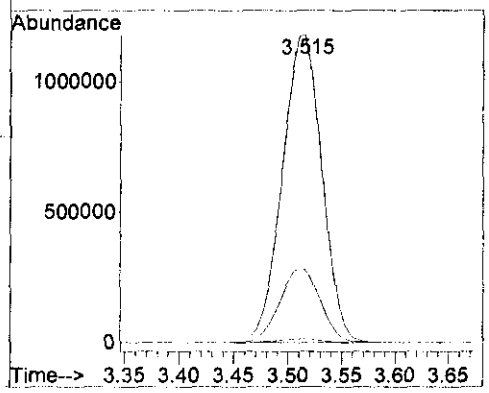


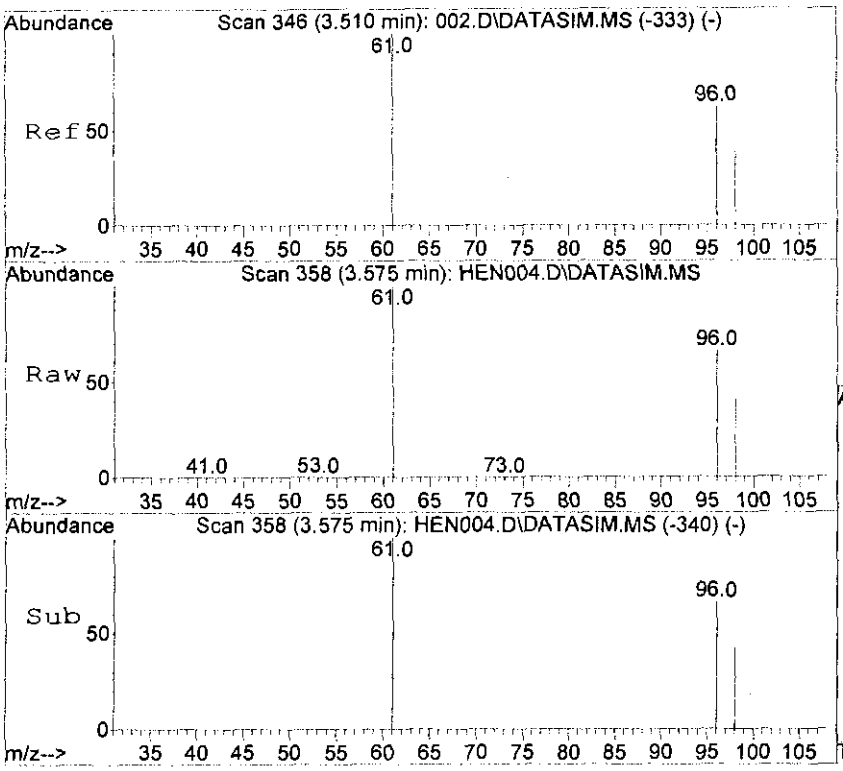


#4
Methyl Tert Butyl Ether
Concen: 10415.99 ppbv
RT: 3.515 min Scan# 347
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 73 Resp: 3012041

Ion	Ratio	Lower	Upper
73	100		
53	1.2	1.1	1.7
41	24.6	21.8	32.6

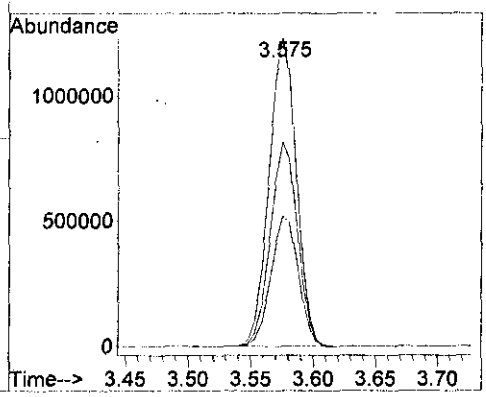


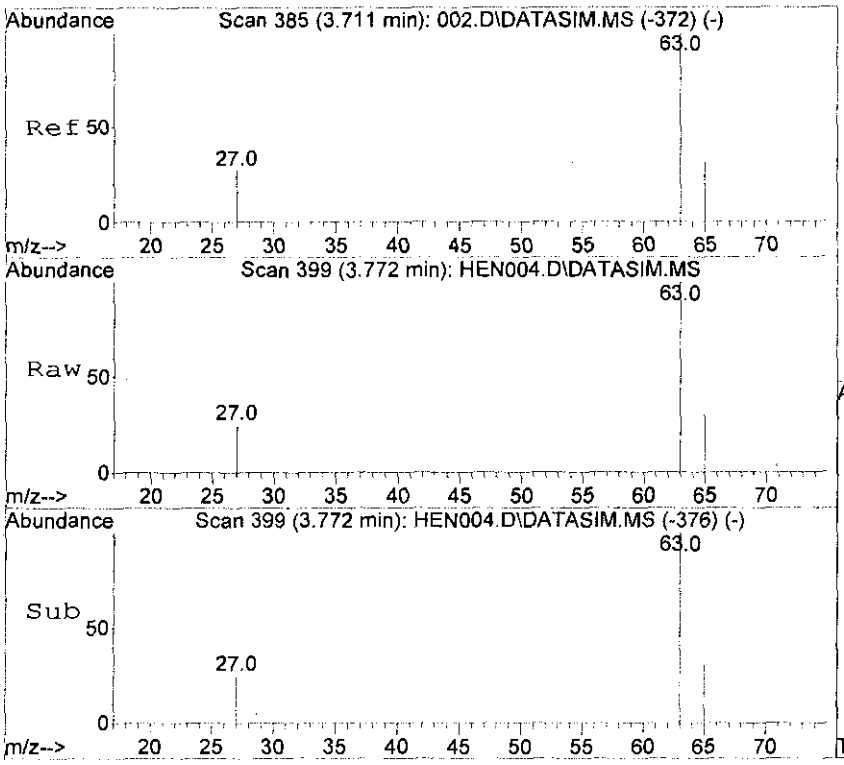


#5
trans-1,2-Dichloroethene
Concen: 10949.67 ppbv
RT: 3.575 min Scan# 358
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 61 Resp: 1861421

Ion	Ratio	Lower	Upper
61	100		
96	65.9	51.3	76.9
98	42.3	32.7	49.1

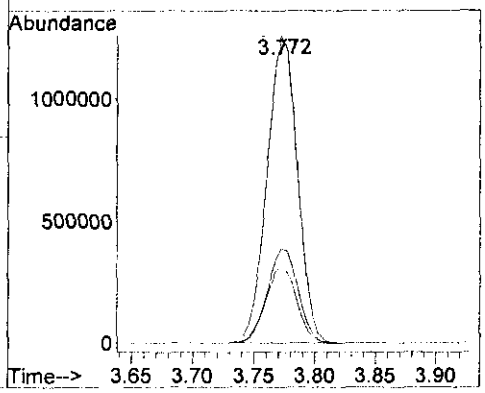


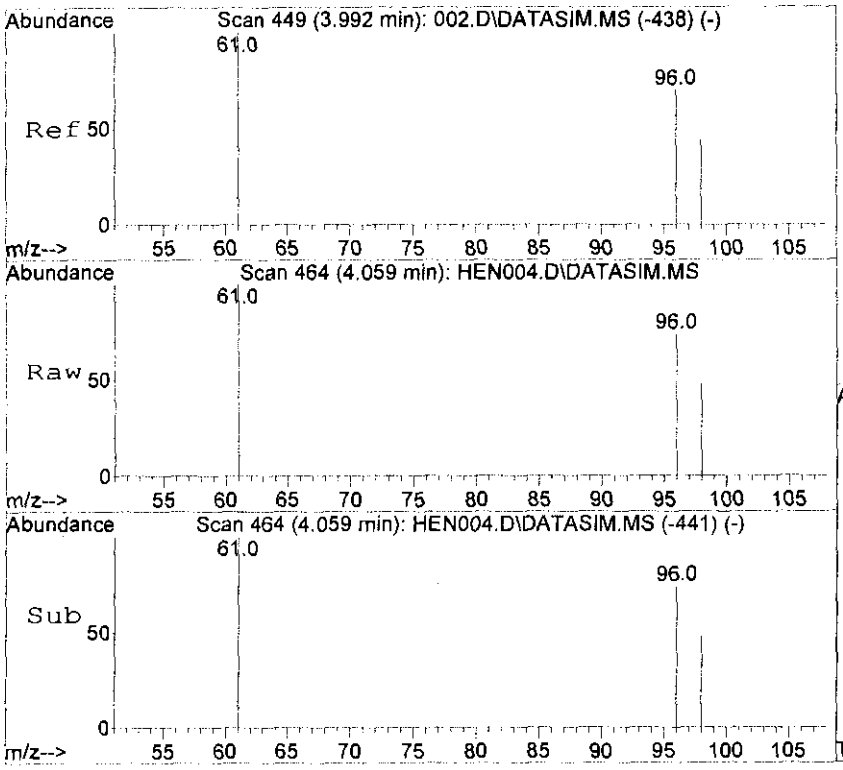


#6
1,1-Dichloroethane
Concen: 10435.71 ppbv
RT: 3.772 min Scan# 399
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 63 Resp: 2178633

Ion	Ratio	Lower	Upper
63	100		
65	31.1	24.7	37.1
27	25.4	22.0	33.0

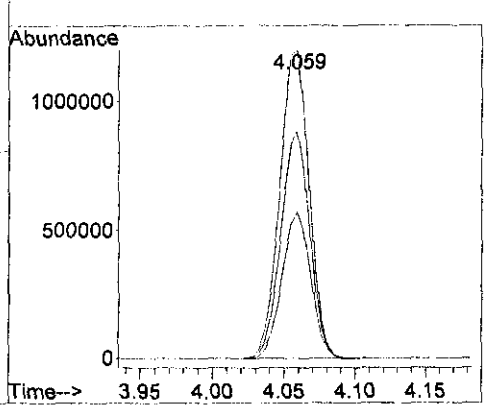


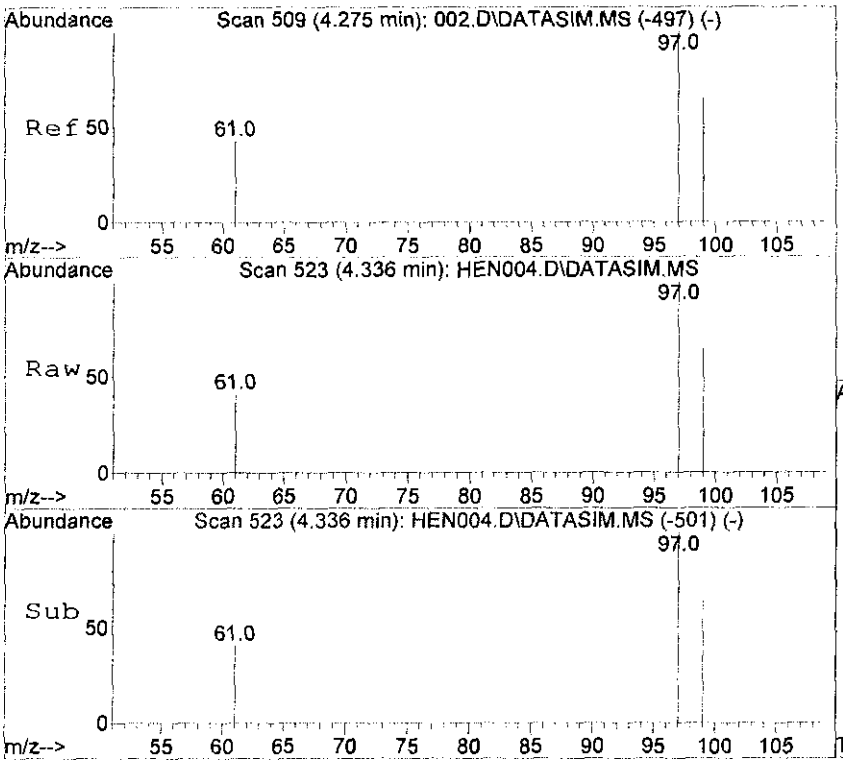


#7
cis-1,2-Dichloroethene
Concen: 10560.97 ppbv
RT: 4.059 min Scan# 464
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 61 Resp: 1731281

Ion	Ratio	Lower	Upper
61	100		
96	72.3	56.2	84.4
98	46.6	36.0	54.0

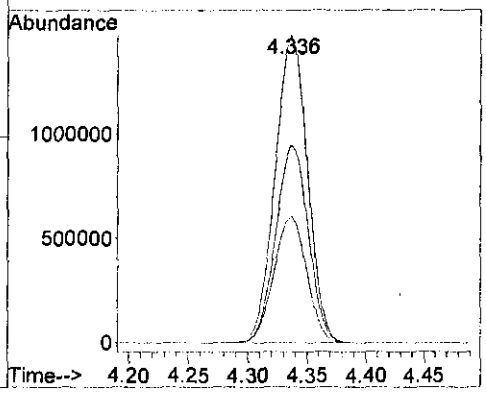


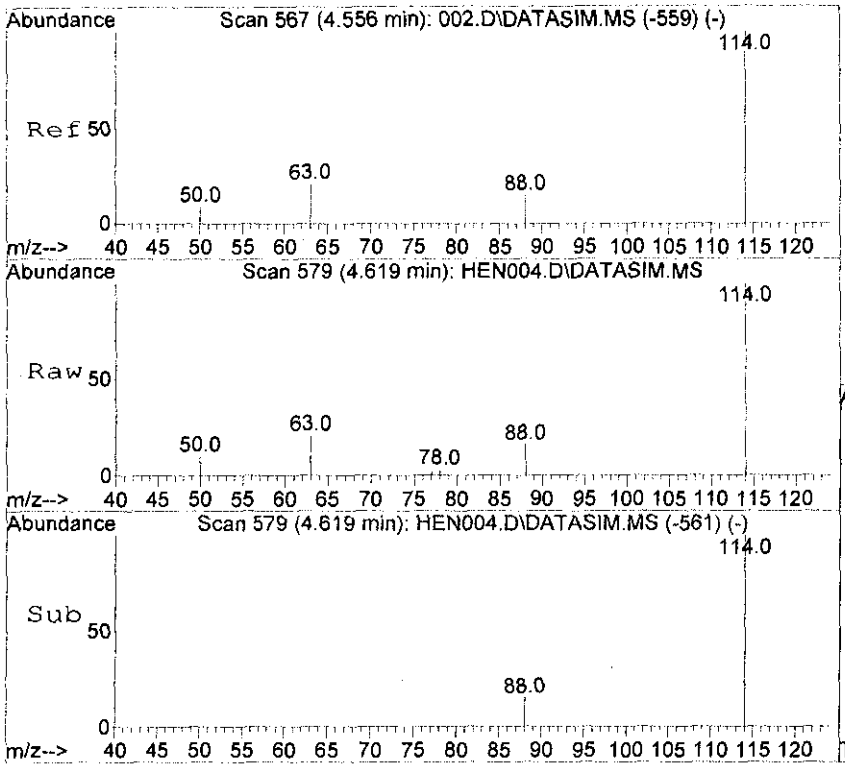


#8
1,1,1-Trichloroethane
Concen: 10079.41 ppbv
RT: 4.336 min Scan# 523
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 97 Resp: 2809503

Ion	Ratio	Lower	Upper
97	100		
99	64.7	51.5	77.3
61	41.7	35.8	53.8

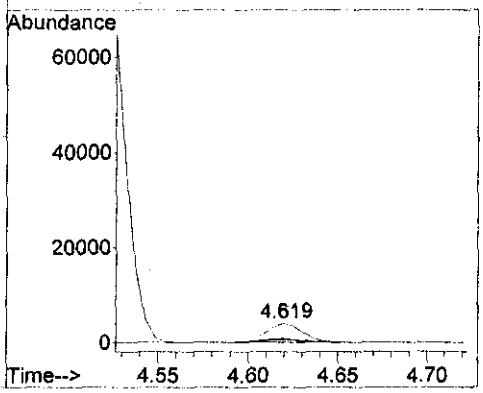


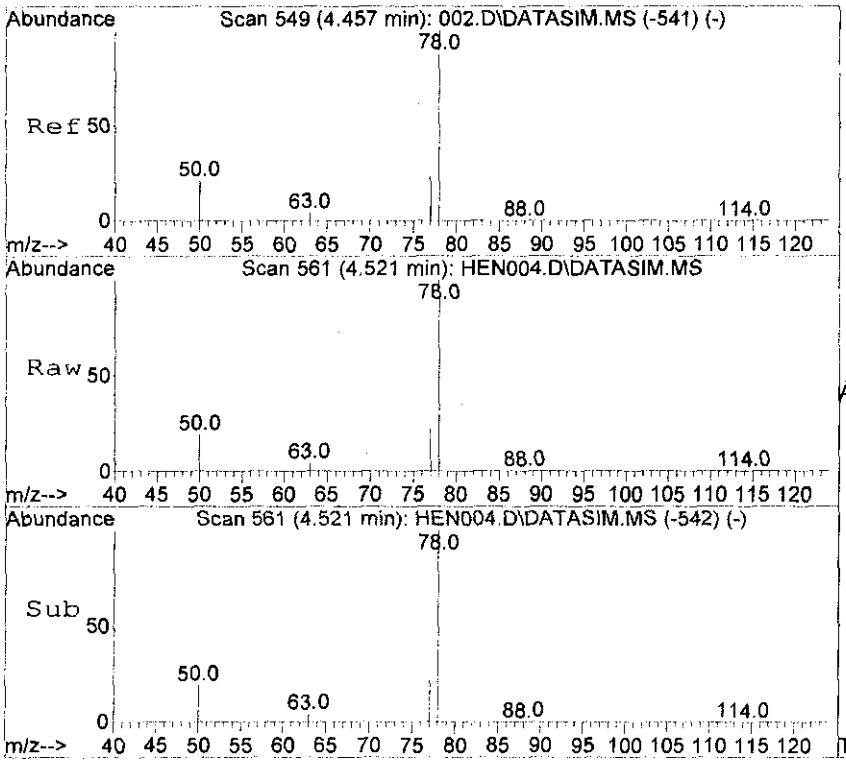


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion:114 Resp: 5532

Ion	Ratio	Lower	Upper
114	100		
63	20.3	16.7	25.1
88	15.3	12.2	18.2

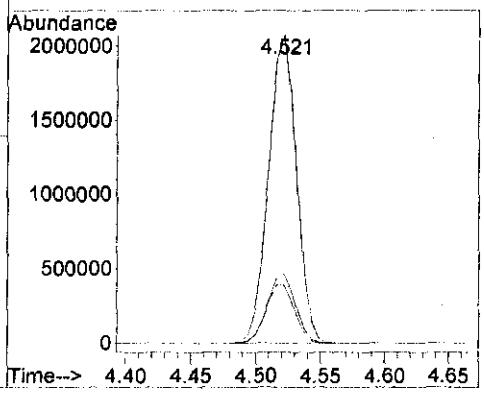


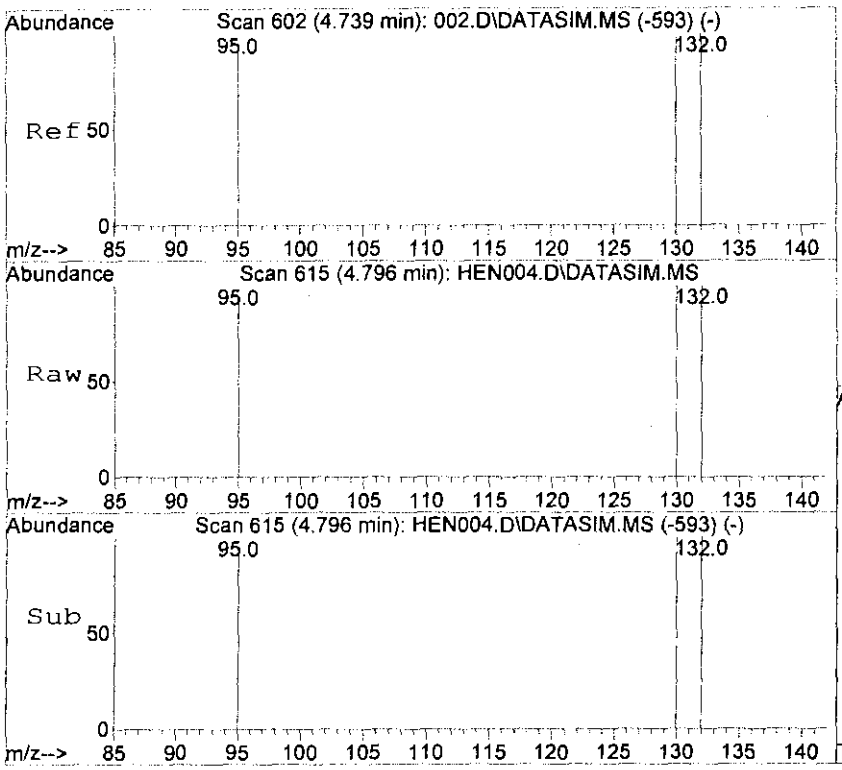


#10
Benzene
Concen: 10509.06 ppbv
RT: 4.521 min Scan# 561
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 78 Resp: 3126074

Ion	Ratio	Lower	Upper
78	100		
77	22.7	18.2	27.4
50	19.6	15.9	23.9

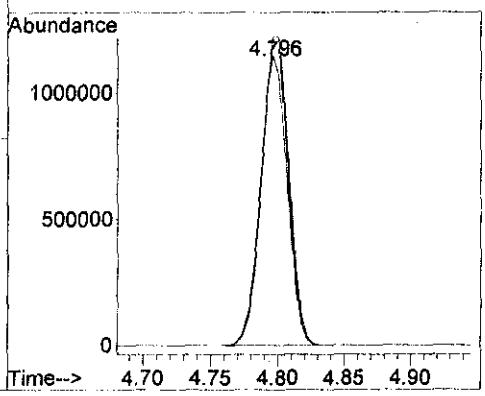


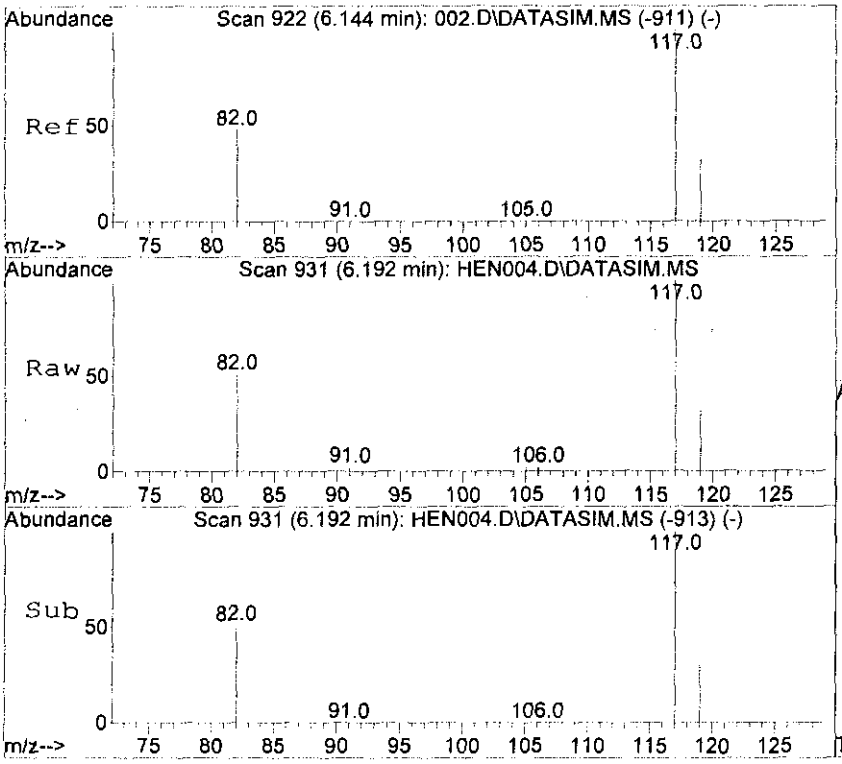


#11
Trichloroethene
Concen: 10151.80 ppbv
RT: 4.796 min Scan# 615
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion:130 Resp: 1689338

Ion	Ratio	Lower	Upper
130	100		
132	101.5	80.4	120.6
95	94.2	78.6	118.0

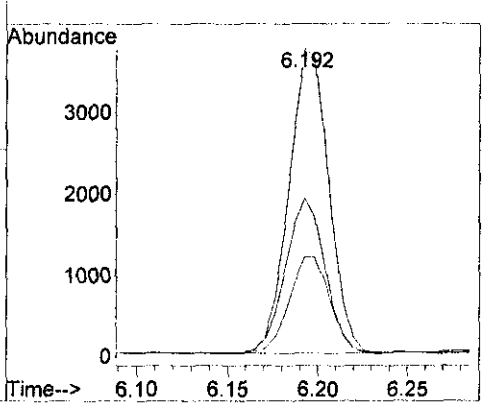


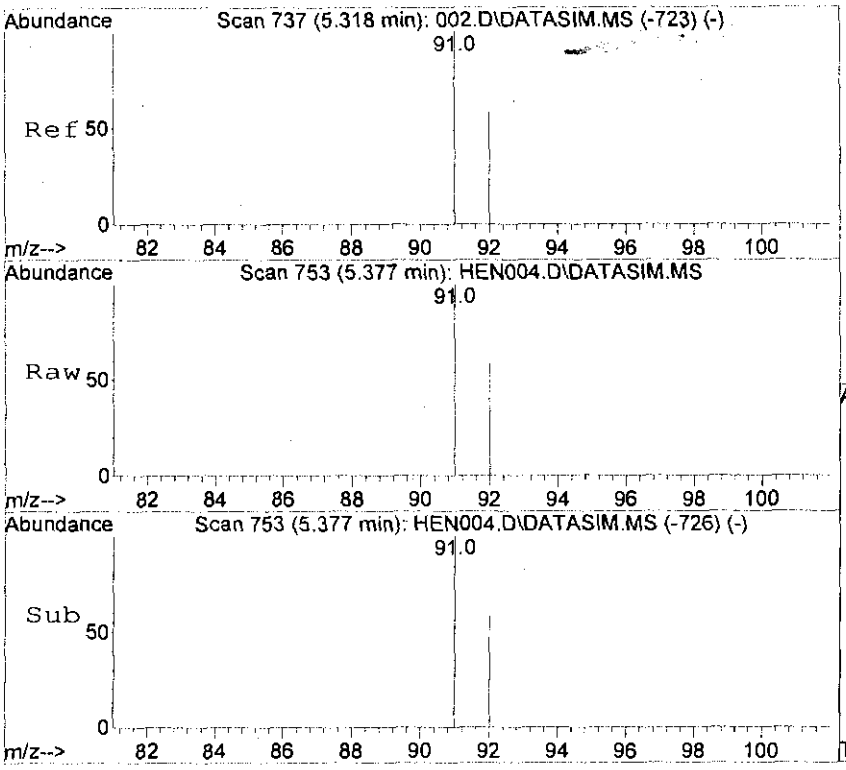


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.192 min Scan# 931
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion:117 Resp: 5811

Ion	Ratio	Lower	Upper
117	100		
82	49.8	41.4	62.0
119	32.4	25.8	38.6

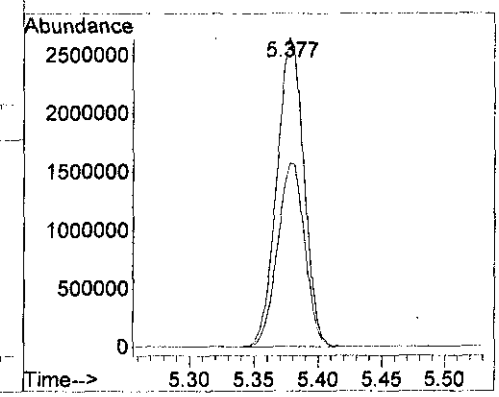


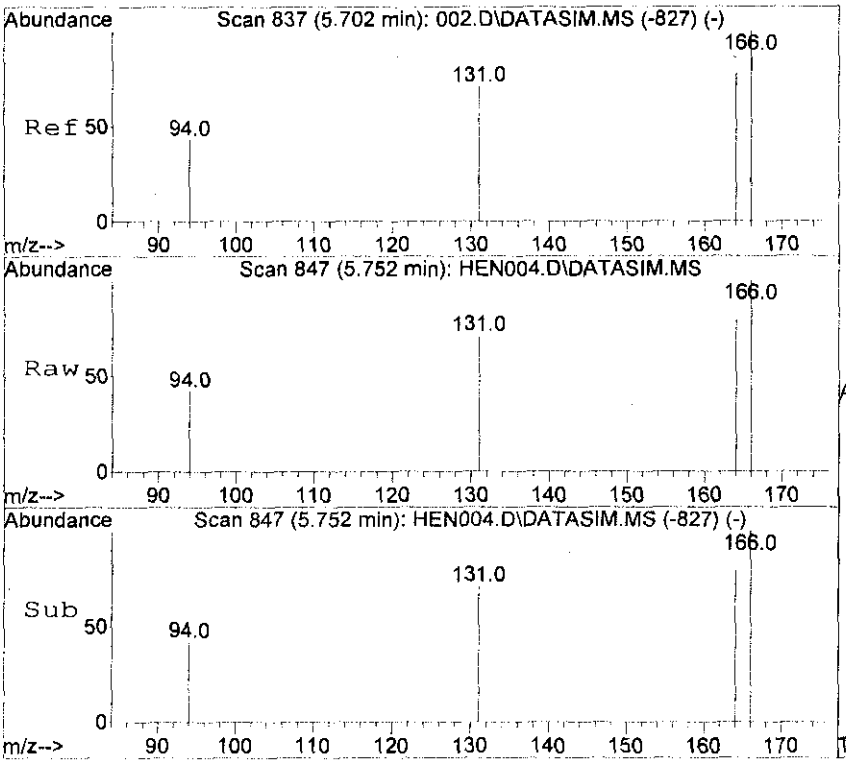


#13
Toluene
Concen: 9714.32 ppbv
RT: 5.377 min Scan# 753
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 91 Resp: 3889415

Ion	Ratio	Lower	Upper
91	100		
92	59.8	47.4	71.2

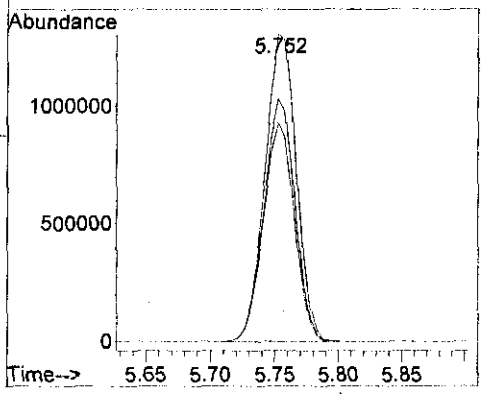


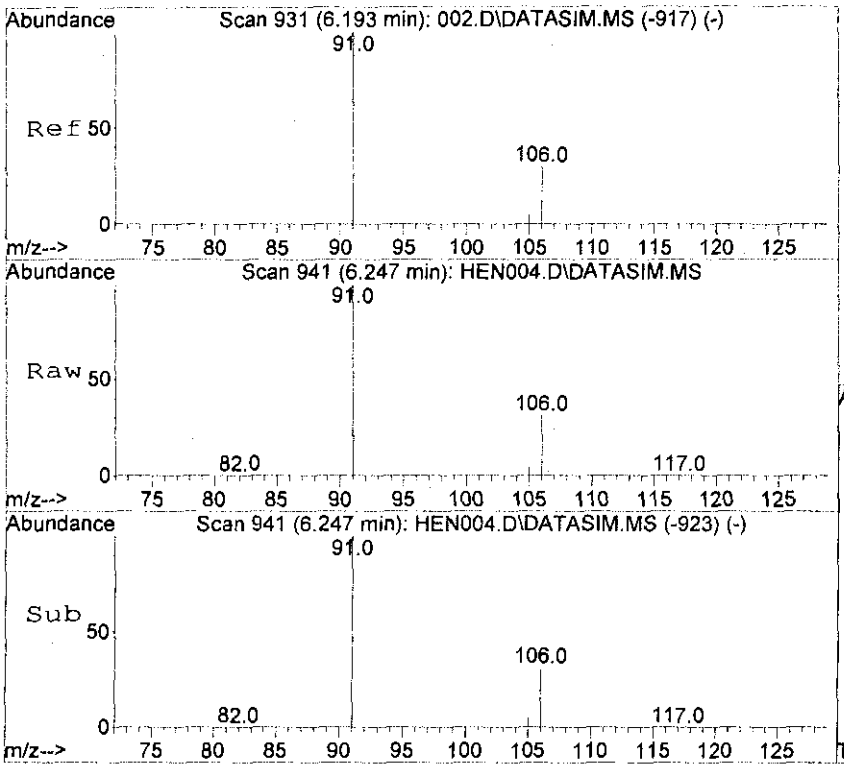


#14
Tetrachloroethene
Concen: 10531.09 ppbv
RT: 5.752 min Scan# 847
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion:166 Resp: 2228131

Ion	Ratio	Lower	Upper
166	100		
164	77.9	62.5	93.7
131	70.3	57.0	85.4

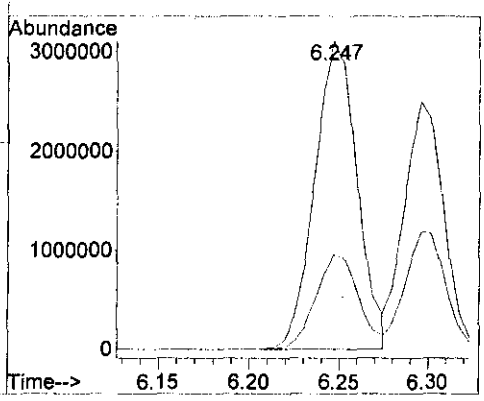


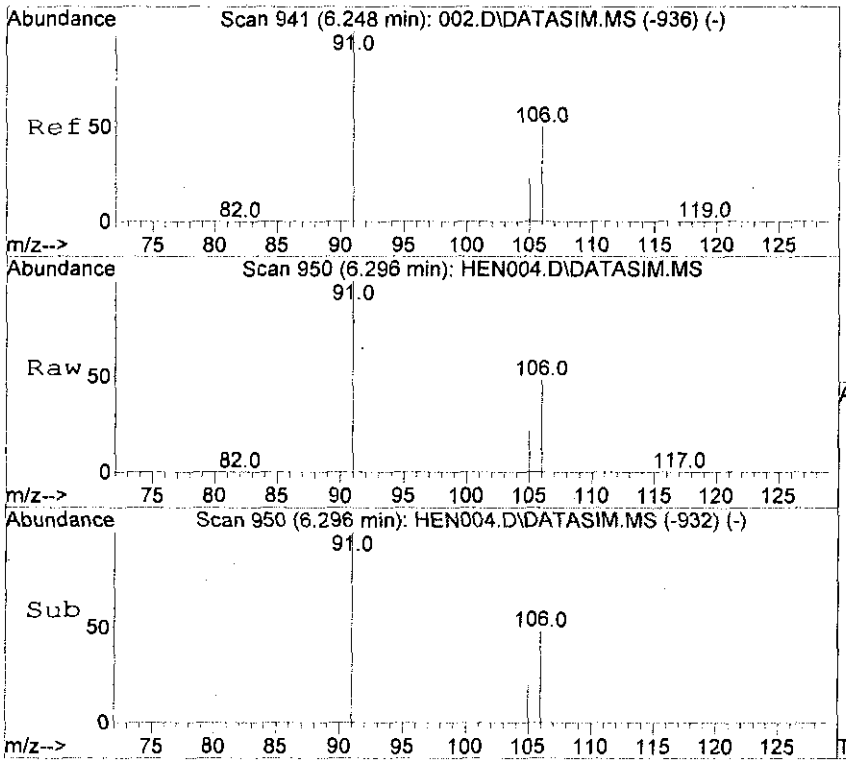


#15
Ethyl Benzene
Concen: 10046.73 ppbv
RT: 6.247 min Scan# 941
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 91 Resp: 5158142

Ion	Ratio	Lower	Upper
91	100		
106	30.7	23.9	35.9

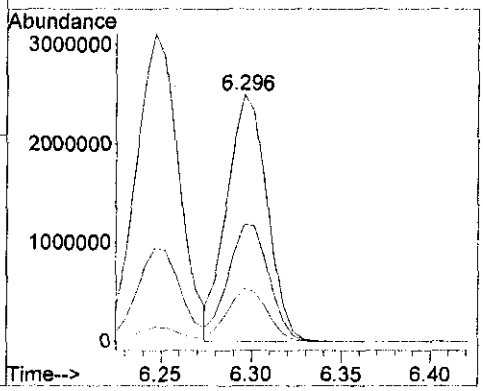


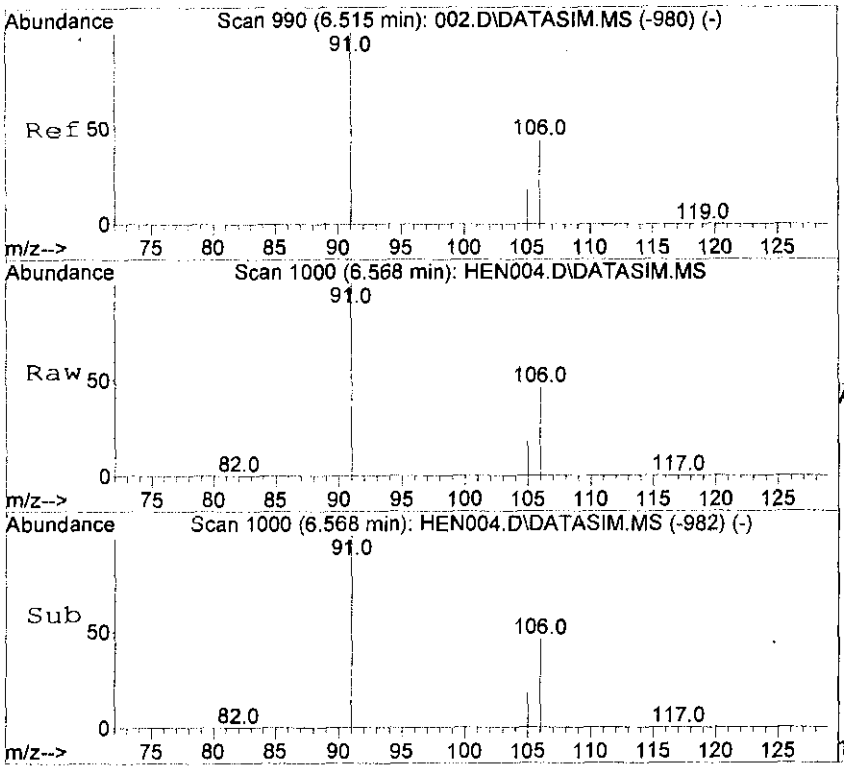


#16
m,p-Xylene
Concen: 9692.67 ppbv
RT: 6.296 min Scan# 950
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 91 Resp: 3856708

Ion	Ratio	Lower	Upper
91	100		
106	47.6	37.3	55.9
105	21.4	16.7	25.1

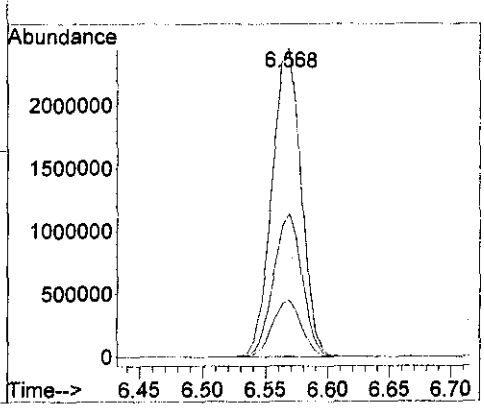




#17
o-Xylene
Concen: 9580.09 ppbv
RT: 6.568 min Scan# 1000
Delta R.T. 0.000 min
Lab File: HEN004.D
Acq: 16 Mar 2012 14:18

Tgt Ion: 91 Resp: 3987953

Ion	Ratio	Lower	Upper
91	100		
106	45.6	35.8	53.8
105	18.1	14.2	21.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN005.D
Acq On : 16 Mar 2012 14:29
Operator : SJT
Sample : STD20120316-2 \ 2ppmv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 14:35:49 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 14:31:35 2012
Response via : Initial Calibration

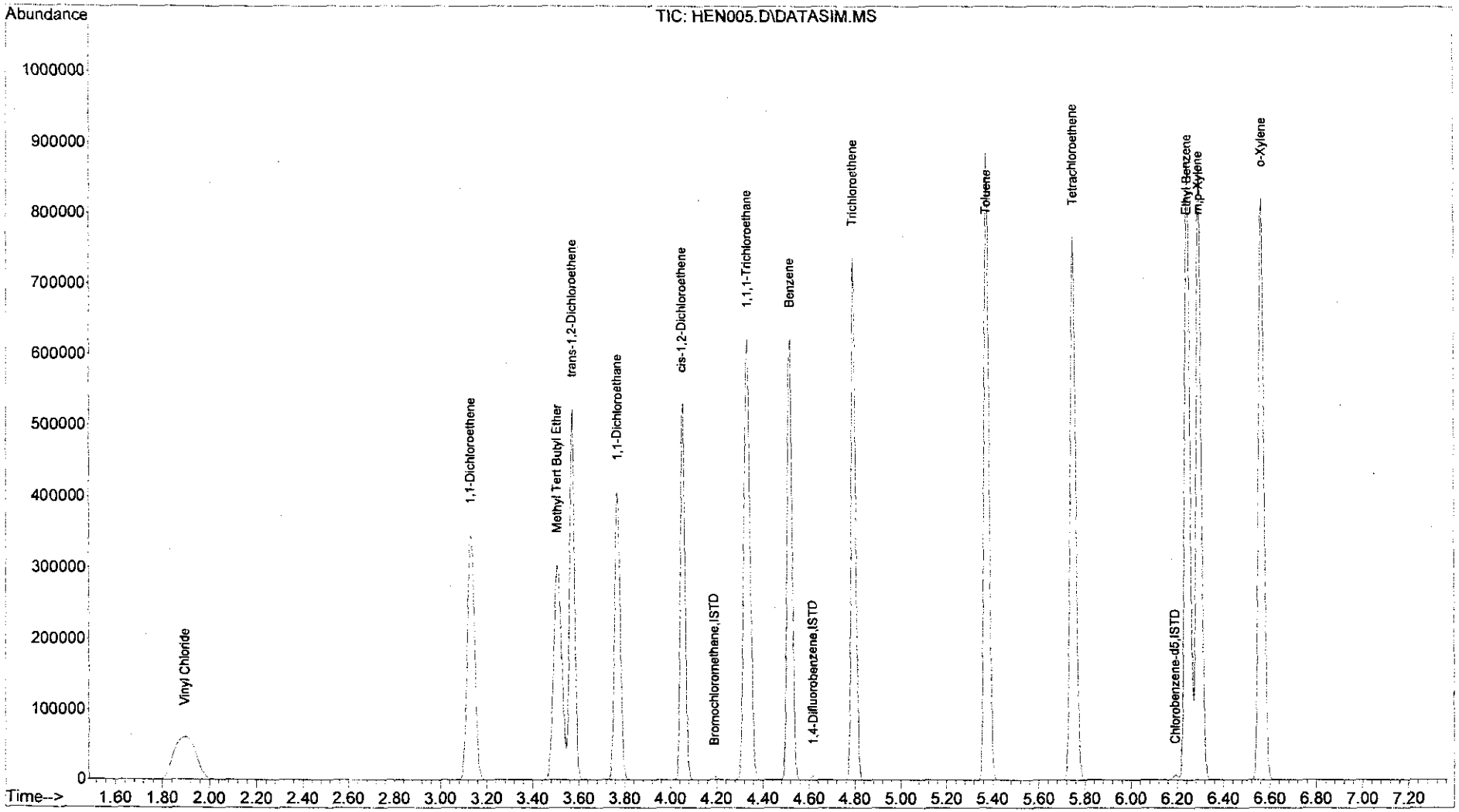
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.192	49	2373	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5684	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.192	117	5973	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Vinyl Chloride	1.896	62	220944	2072.79	ppbv	98
3) 1,1-Dichloroethene	3.132	61	417997	2160.87	ppbv	100
4) Methyl Tert Butyl Ether	3.510	73	604145	2067.19	ppbv	97
5) trans-1,2-Dichloroethene	3.575	61	378304	2201.90	ppbv	99
6) 1,1-Dichloroethane	3.772	63	441750	2093.70	ppbv	99
7) cis-1,2-Dichloroethene	4.054	61	355519	2145.85	ppbv	99
8) 1,1,1-Trichloroethane	4.336	97	568630	2018.53	ppbv	99
10) Benzene	4.521	78	642350	2101.67	ppbv	100
11) Trichloroethene	4.796	130	341826	1999.22	ppbv	98
13) Toluene	5.377	91	805100	1956.30	ppbv	100
14) Tetrachloroethene	5.752	166	443377	2038.75	ppbv	100
15) Ethyl Benzene	6.247	91	1068350	2024.43	ppbv	99
16) m,p-Xylene	6.296	91	790362	1932.46	ppbv	99
17) o-Xylene	6.568	91	821086	1918.96	ppbv	100

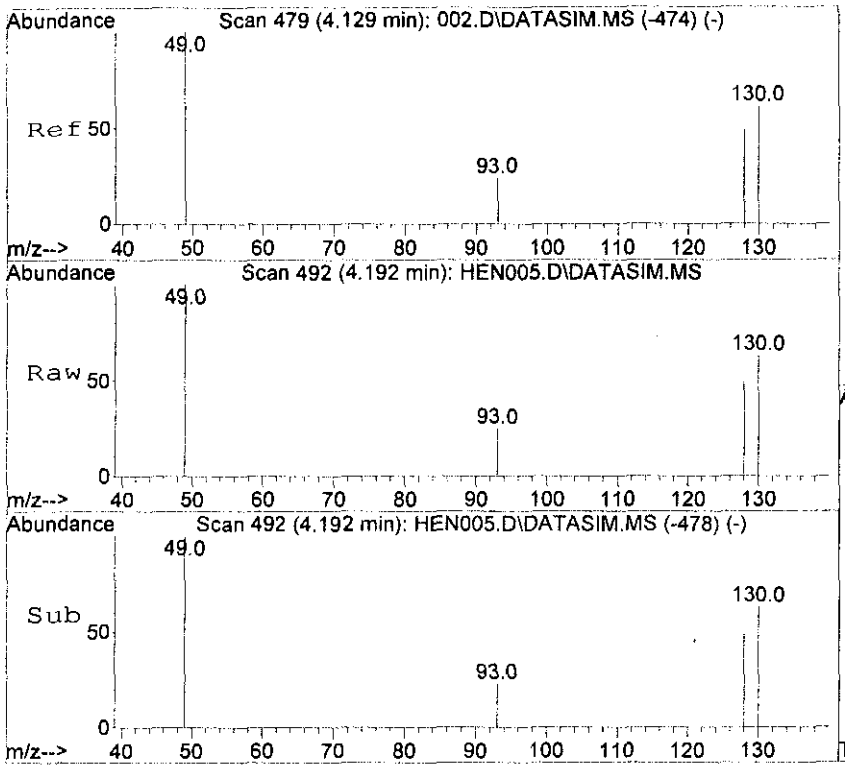
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN005.D
Acq On : 16 Mar 2012 14:29
Operator : SJT
Sample : STD20120316-2 \ 2ppmv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 14:35:49 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 14:31:35 2012
Response via : Initial Calibration

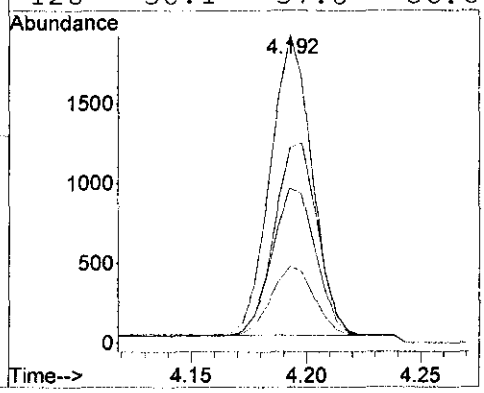


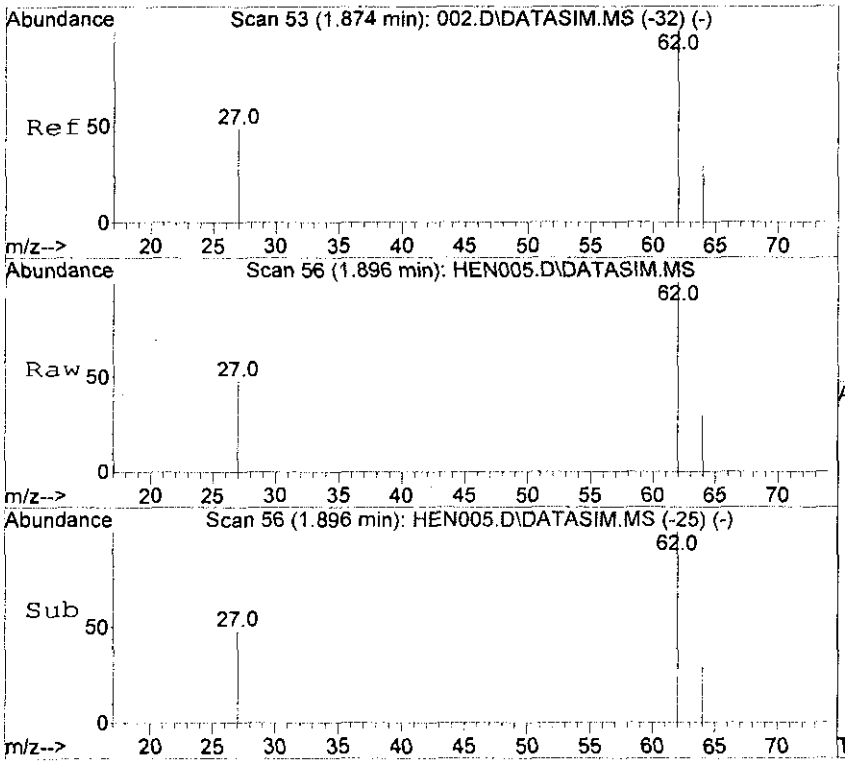


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 49 Resp: 2373

Ion	Ratio	Lower	Upper
49	100		
130	63.3	46.5	69.7
93	24.8	19.0	28.6
128	50.1	37.8	56.6

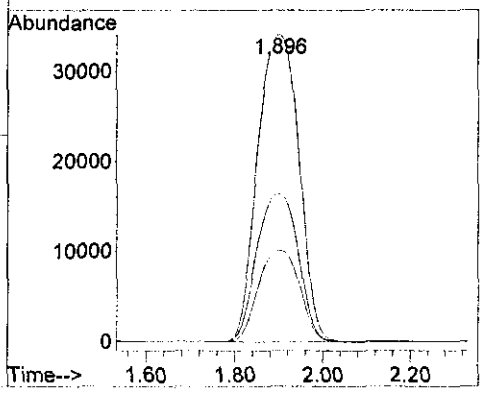


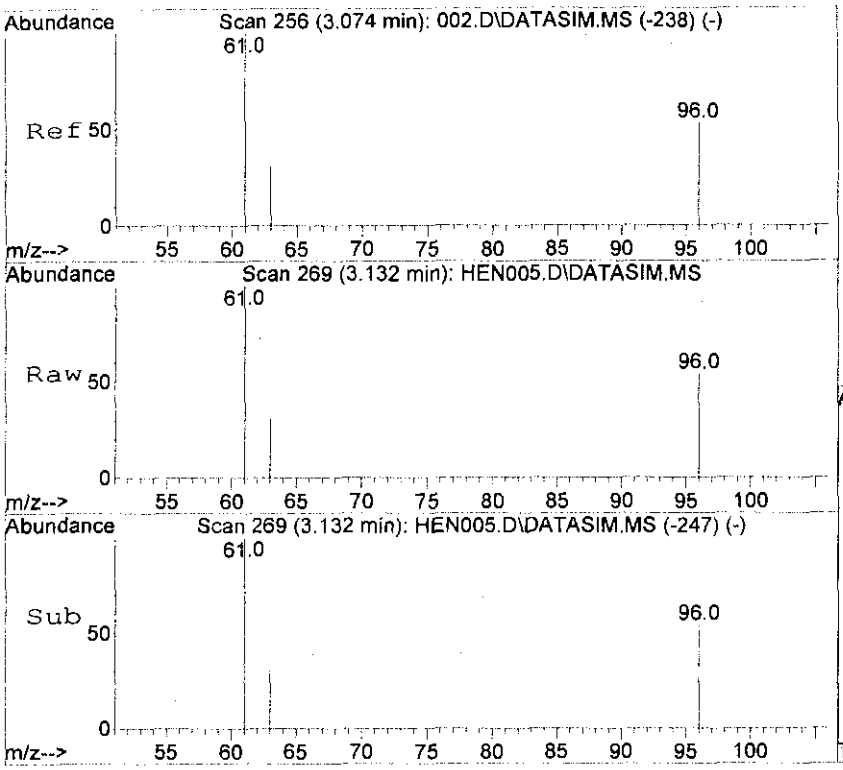


#2
Vinyl Chloride
Concen: 2072.79 ppbv
RT: 1.896 min Scan# 56
Delta R.T. -0.022 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 62 Resp: 220944

Ion	Ratio	Lower	Upper
62	100		
64	29.6	23.7	35.5
27	48.1	39.8	59.8

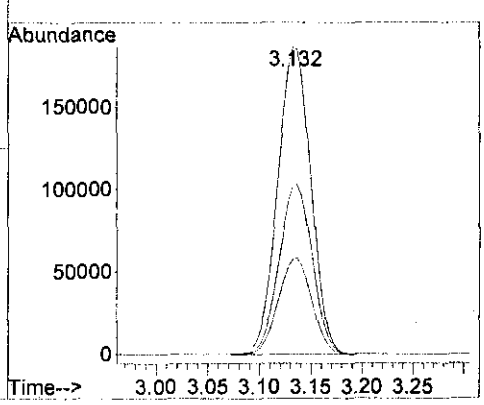


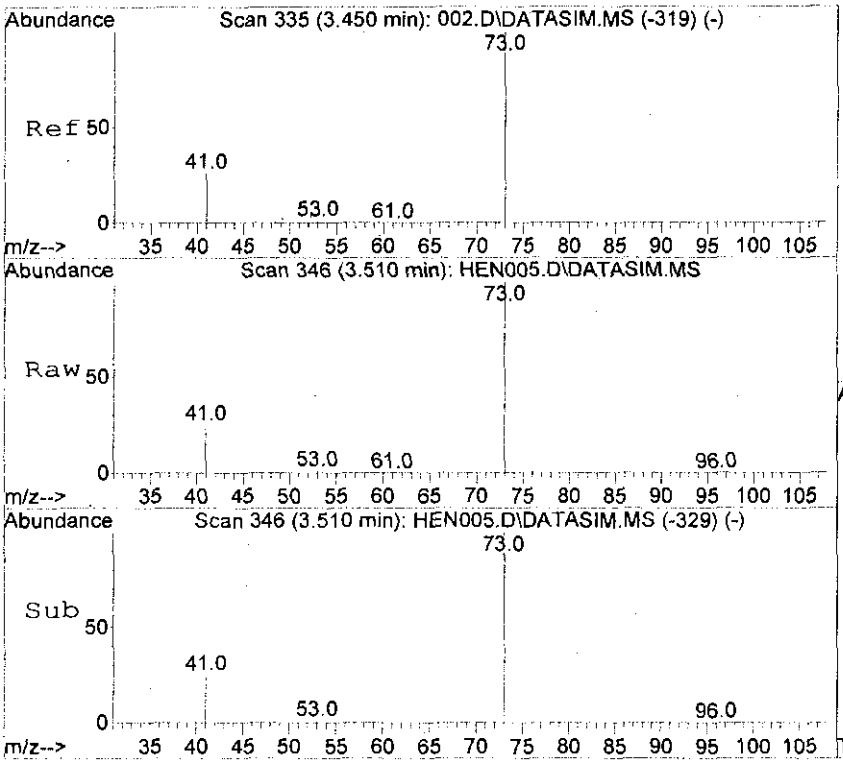


#3
1,1-Dichloroethene
Concen: 2160.87 ppbv
RT: 3.132 min Scan# 269
Delta R.T. -0.004 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 61 Resp: 417997

Ion	Ratio	Lower	Upper
61	100		
96	55.1	43.8	65.6
63	31.3	25.1	37.7

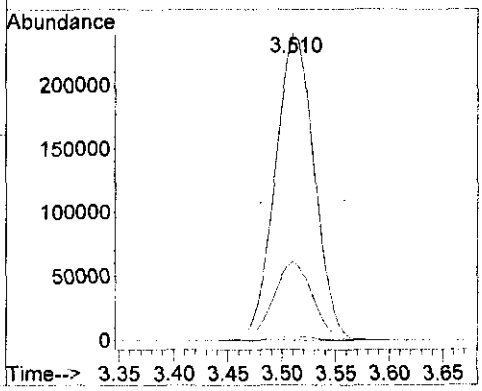


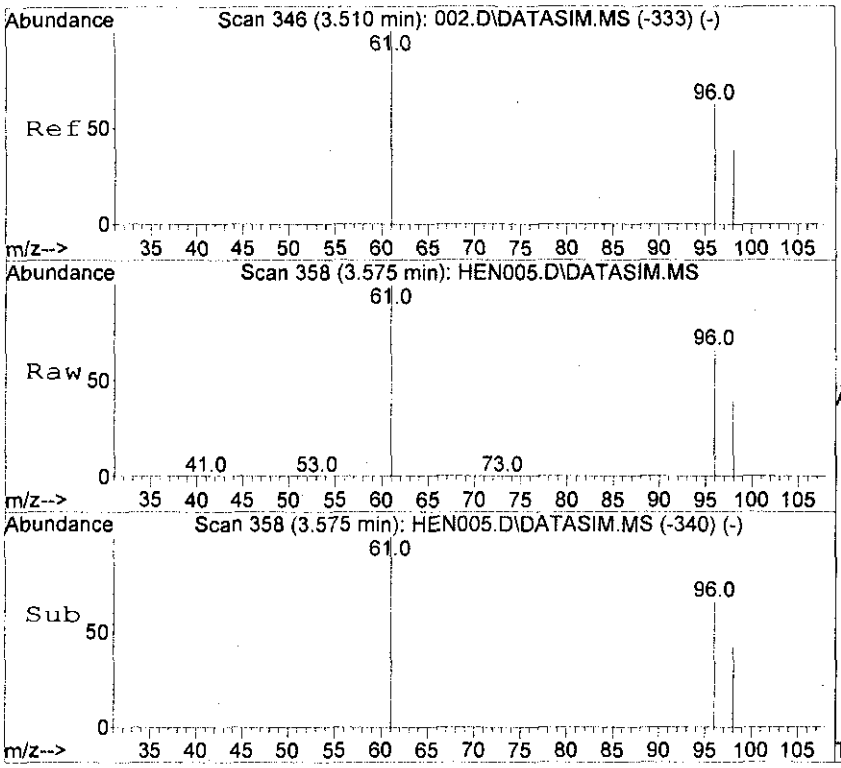


#4
Methyl Tert Butyl Ether
Concen: 2067.19 ppbv
RT: 3.510 min Scan# 346
Delta R.T. -0.005 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 73 Resp: 604145

Ion	Ratio	Lower	Upper
73	100		
53	1.3	1.1	1.7
41	25.5	21.8	32.6

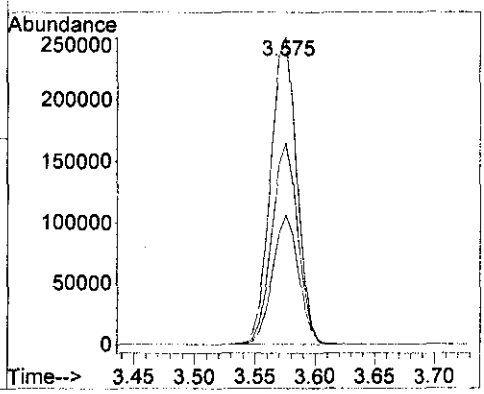


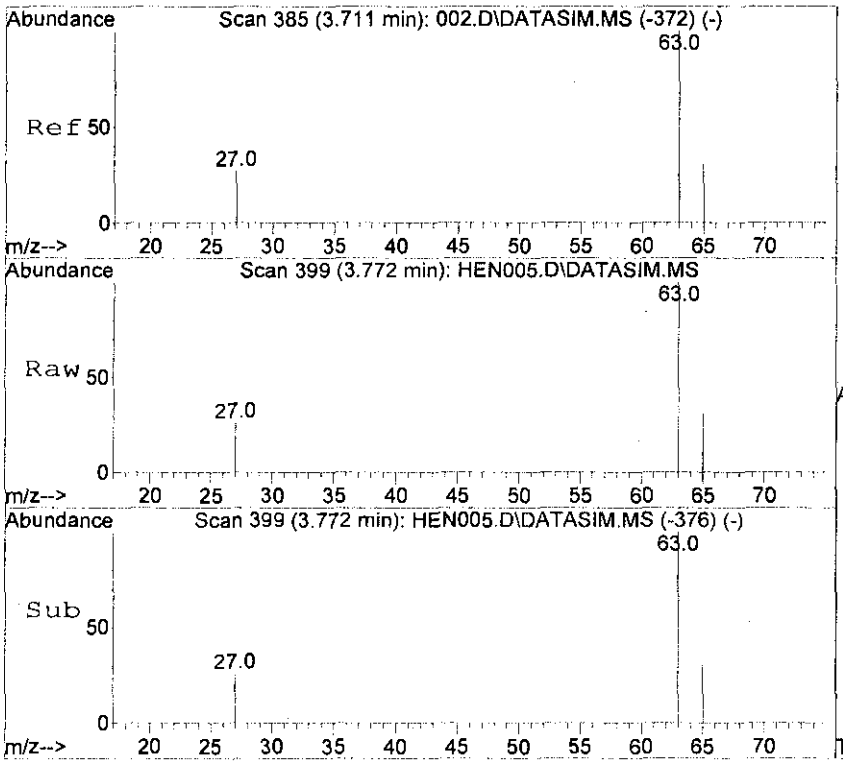


#5
trans-1,2-Dichloroethene
Concen: 2201.90 ppbv
RT: 3.575 min Scan# 358
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 61 Resp: 378304

Ion	Ratio	Lower	Upper
61	100		
96	65.1	51.3	76.9
98	41.7	32.7	49.1

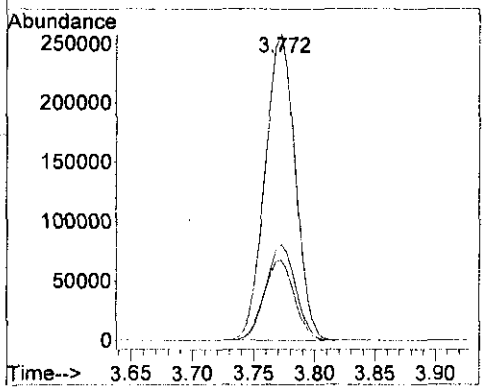


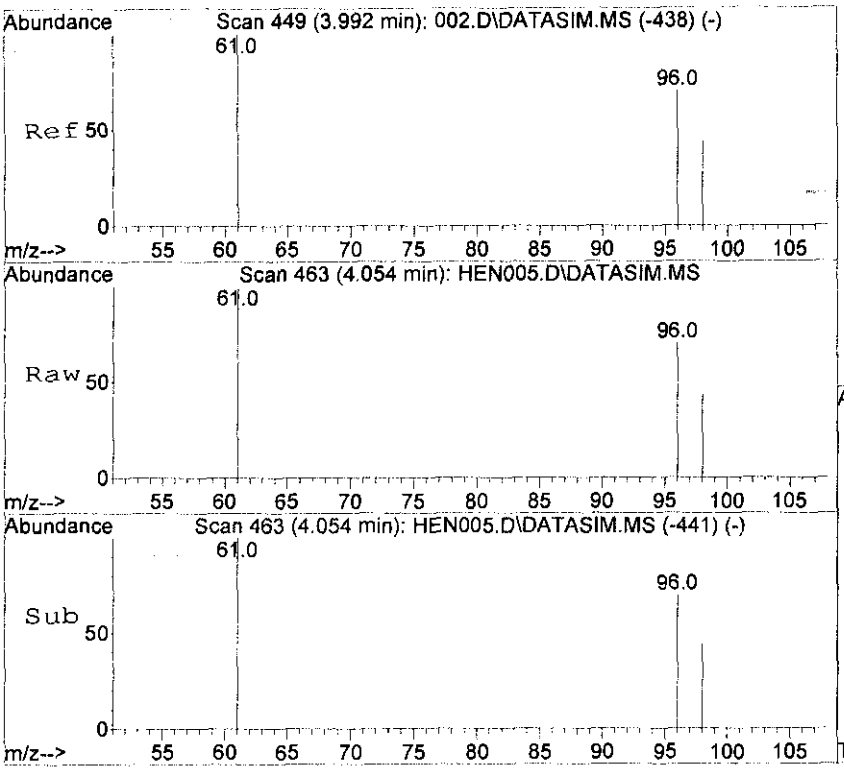


#6
1,1-Dichloroethane
Concen: 2093.70 ppbv
RT: 3.772 min Scan# 399
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 63 Resp: 441750

Ion	Ratio	Lower	Upper
63	100		
65	31.0	24.7	37.1
27	26.4	22.0	33.0

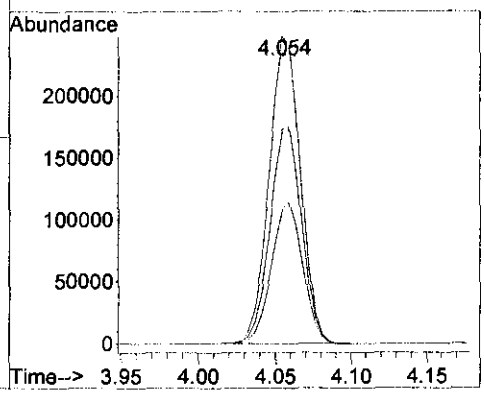


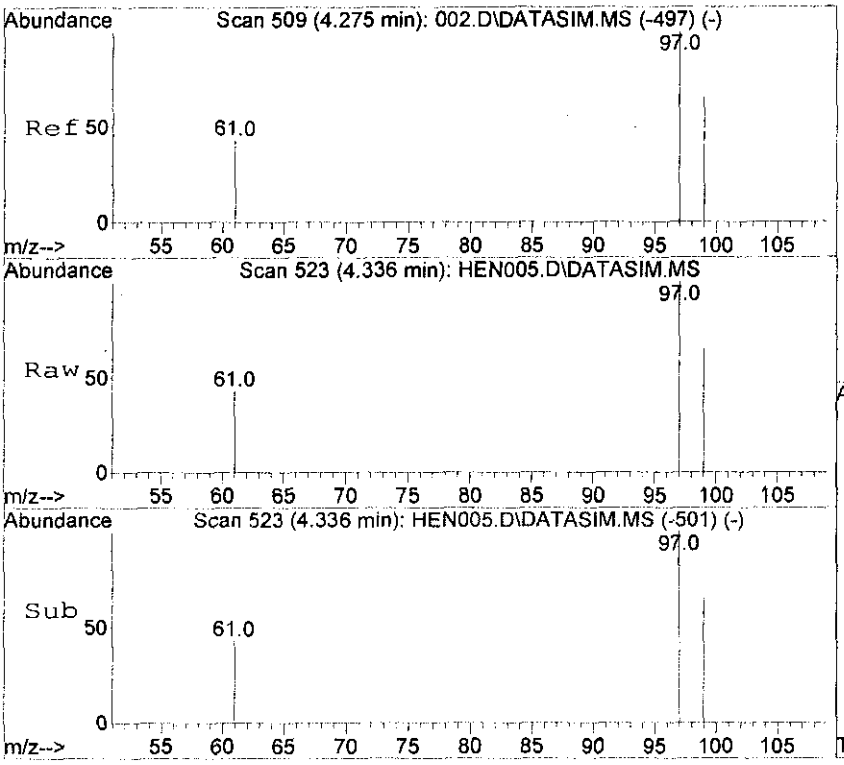


#7
cis-1,2-Dichloroethene
Concen: 2145.85 ppbv
RT: 4.054 min Scan# 463
Delta R.T. -0.004 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 61 Resp: 355519

Ion	Ratio	Lower	Upper
61	100		
96	71.1	56.2	84.4
98	45.7	36.0	54.0

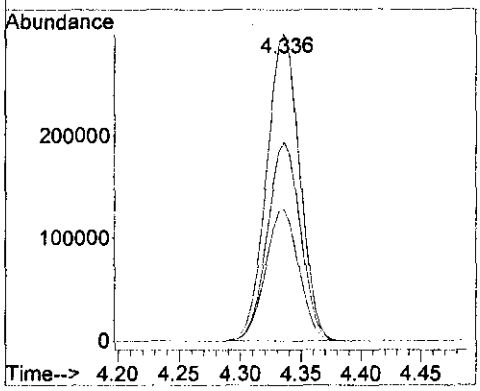


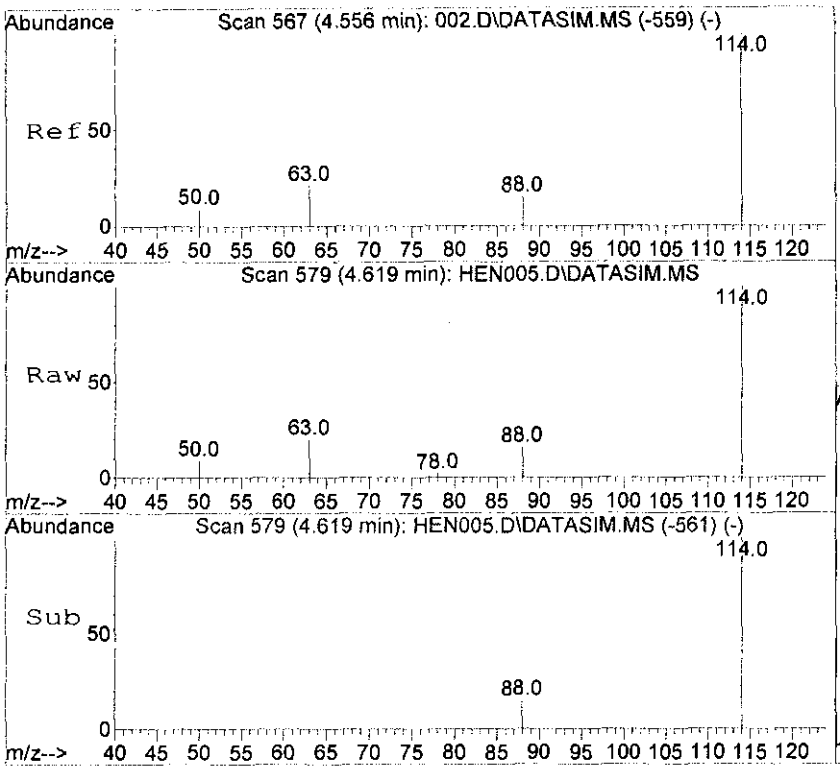


#8
1,1,1-Trichloroethane
Concen: 2018.53 ppbv
RT: 4.336 min Scan# 523
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 97 Resp: 568630

Ion	Ratio	Lower	Upper
97	100		
99	64.5	51.5	77.3
61	43.0	35.8	53.8

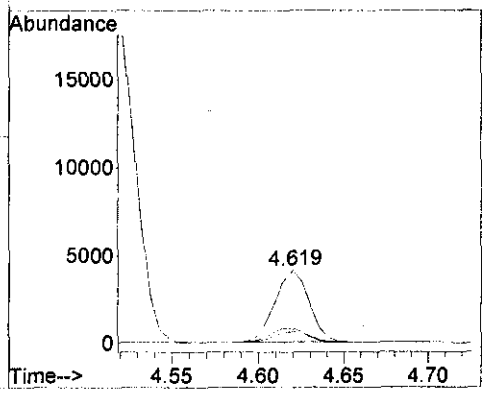


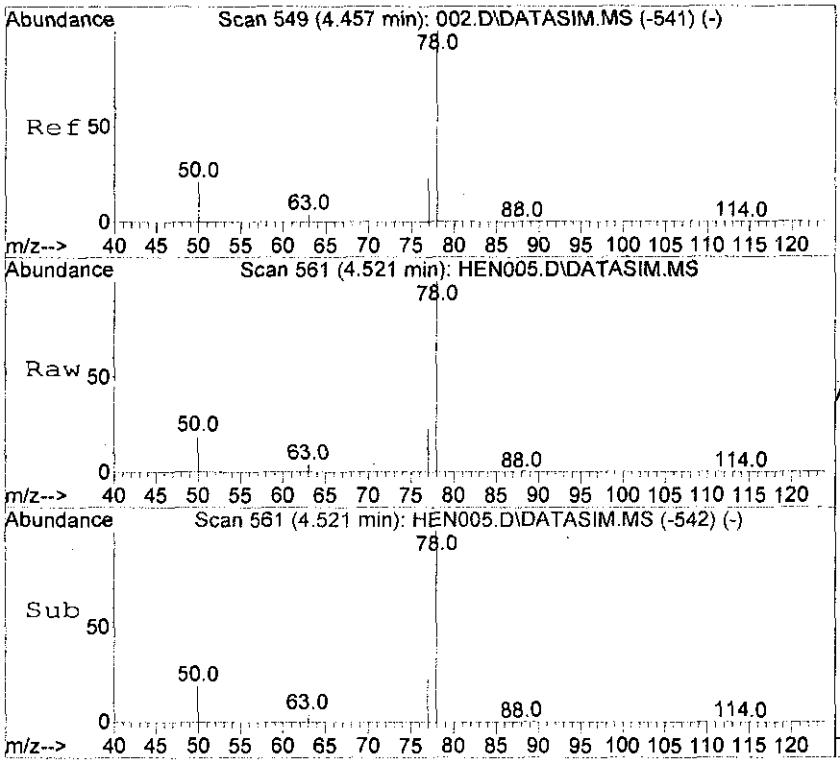


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion:114 Resp: 5684

Ion	Ratio	Lower	Upper
114	100		
63	20.5	16.7	25.1
88	14.9	12.2	18.2

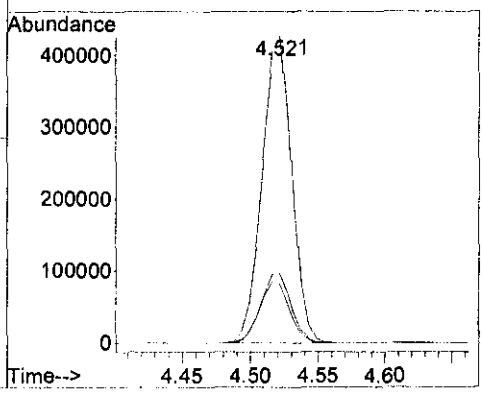


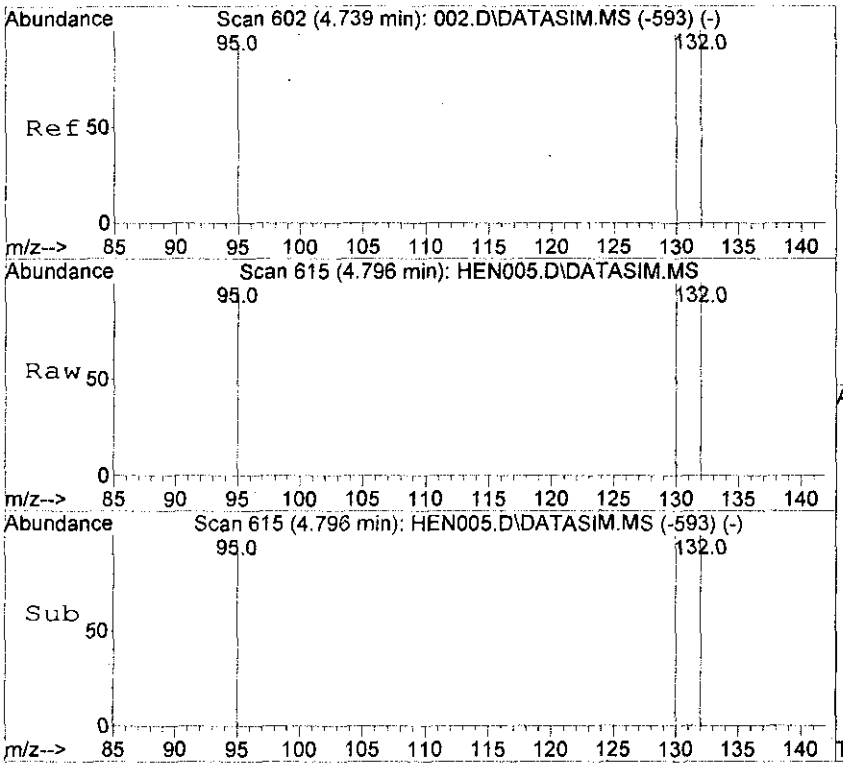


#10
Benzene
Concen: 2101.67 ppbv
RT: 4.521 min Scan# 561
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 78 Resp: 642350

Ion	Ratio	Lower	Upper
78	100		
77	22.9	18.2	27.4
50	20.0	15.9	23.9

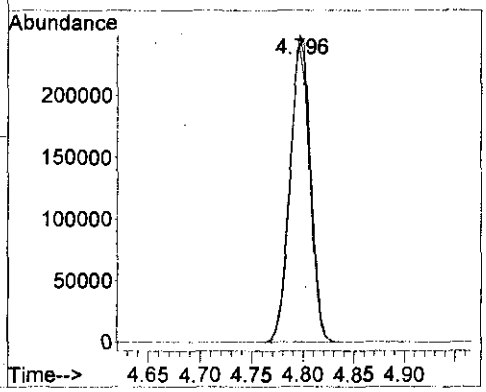


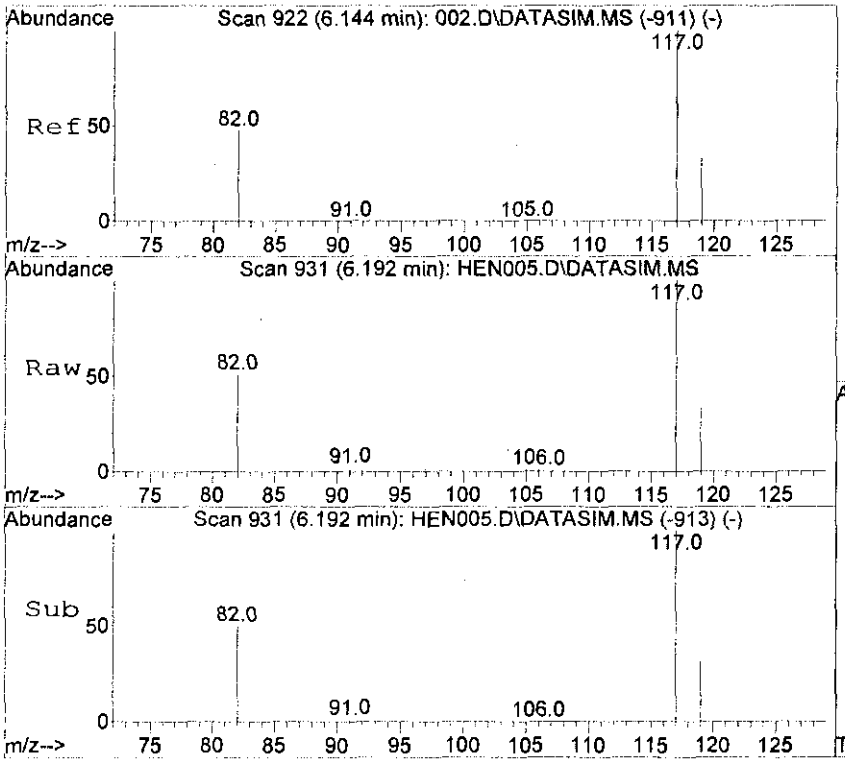


#11
Trichloroethene
Concen: 1999.22 ppbv
RT: 4.796 min Scan# 615
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion:130 Resp: 341826

Ion	Ratio	Lower	Upper
130	100		
132	100.3	80.4	120.6
95	95.4	78.6	118.0

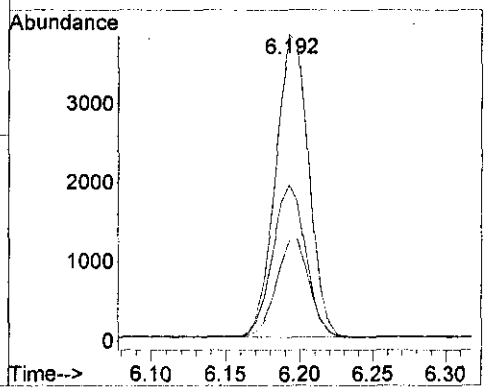


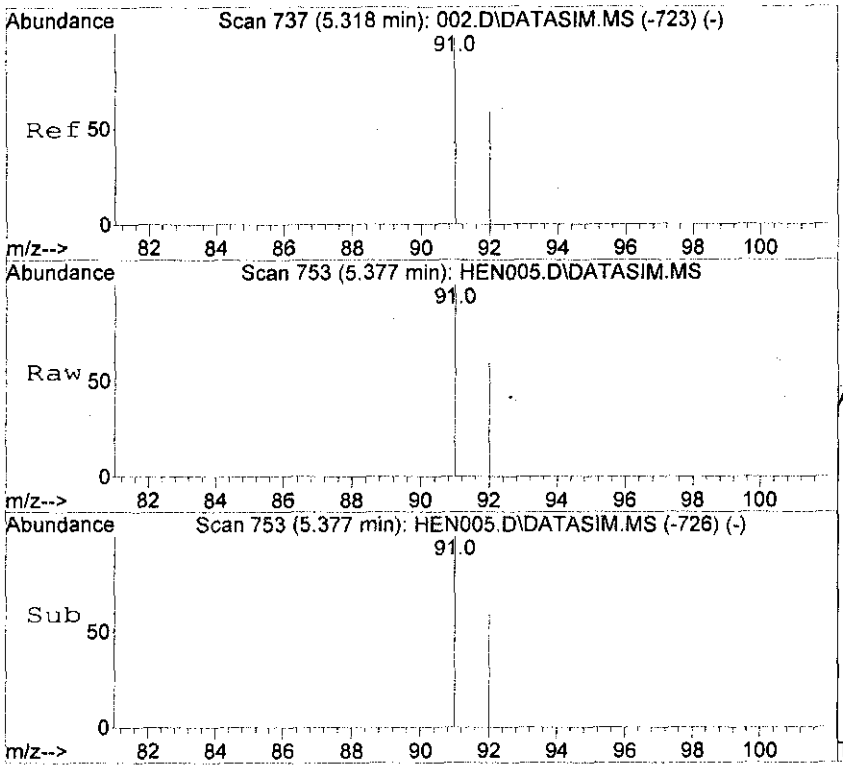


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.192 min Scan# 931
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion:117 Resp: 5973

Ion	Ratio	Lower	Upper
117	100		
82	49.8	41.4	62.0
119	32.0	25.8	38.6

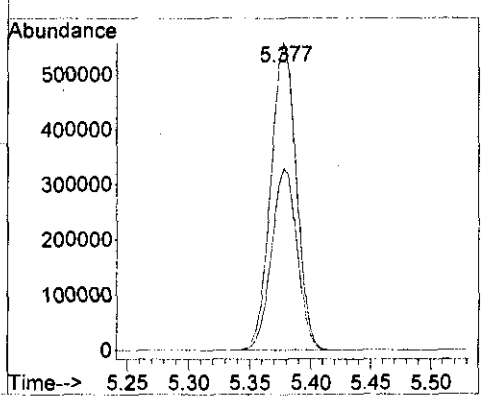


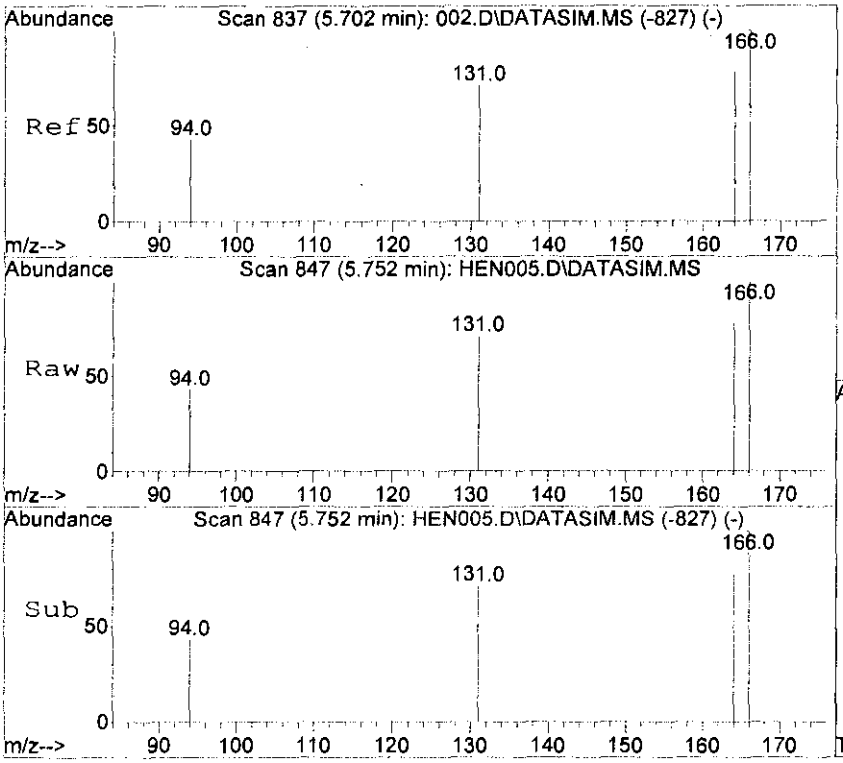


#13
Toluene
Concen: 1956.30 ppbv
RT: 5.377 min Scan# 753
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 91 Resp: 805100

Ion	Ratio	Lower	Upper
91	100		
92	59.4	47.4	71.2

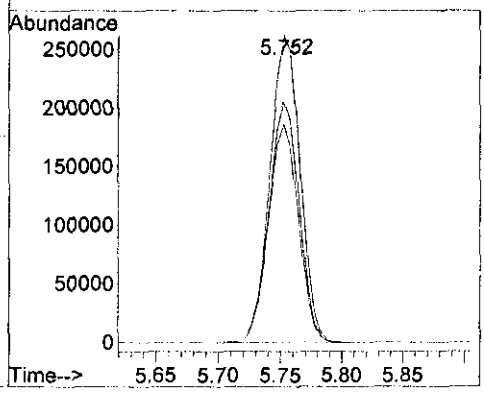


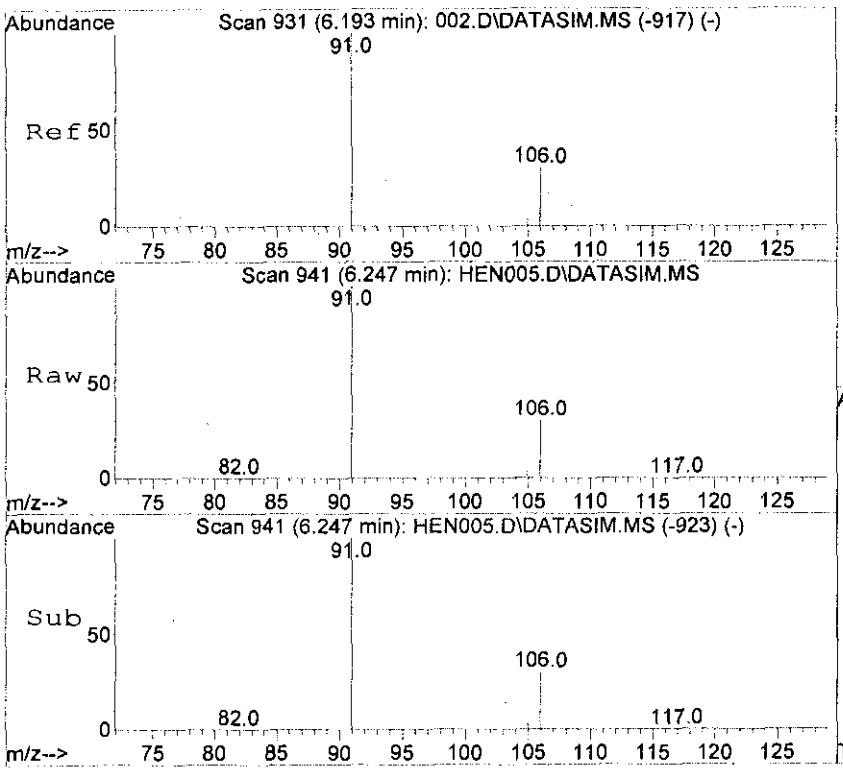


#14
Tetrachloroethene
Concen: 2038.75 ppbv
RT: 5.752 min Scan# 847
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion:166 Resp: 443377

Ion	Ratio	Lower	Upper
166	100		
164	78.1	62.5	93.7
131	70.7	57.0	85.4

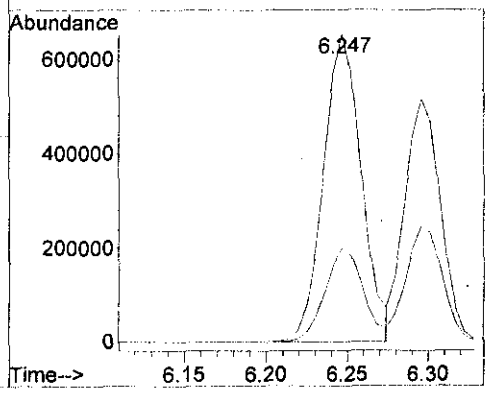


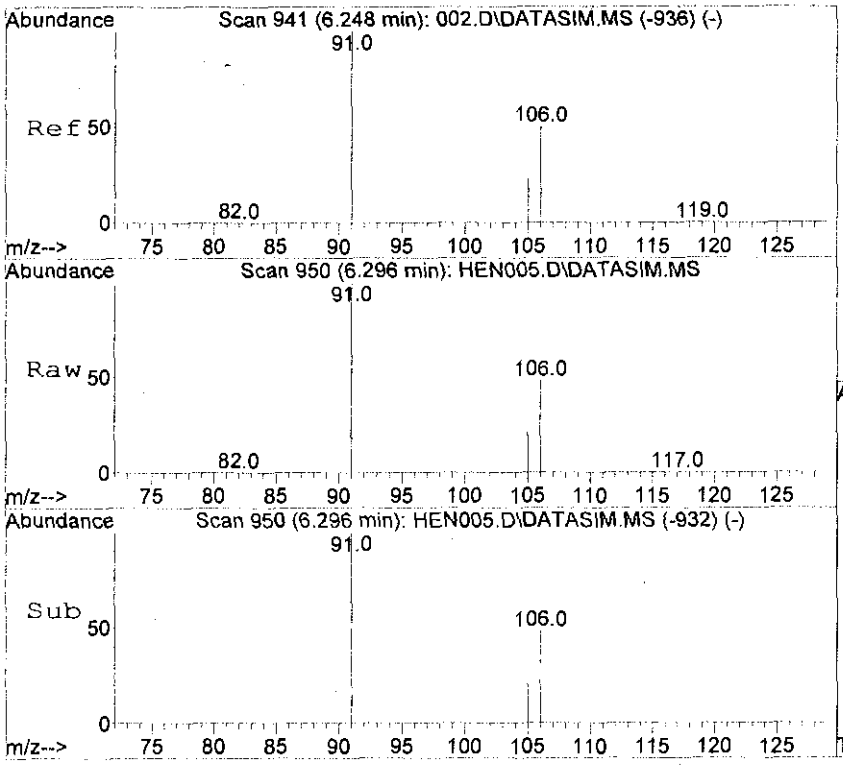


#15
Ethyl Benzene
Concen: 2024.43 ppbv
RT: 6.247 min Scan# 941
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 91 Resp: 1068350

Ion	Ratio	Lower	Upper
91	100		
106	30.4	23.9	35.9

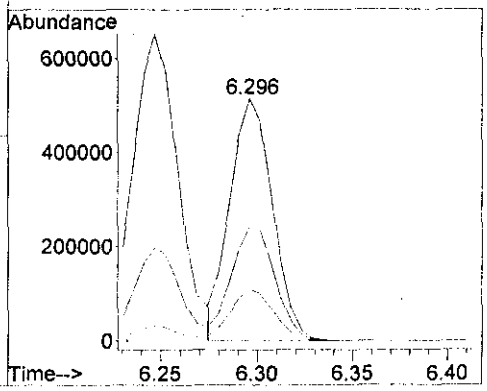


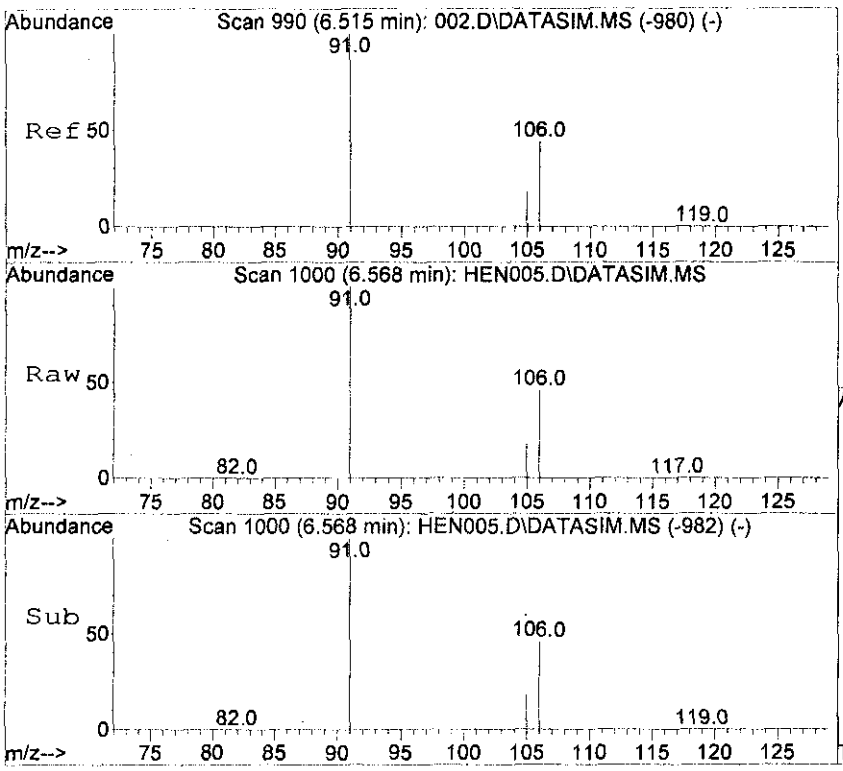


#16
m,p-Xylene
Concen: 1932.46 ppbv
RT: 6.296 min Scan# 950
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 91 Resp: 790362

Ion	Ratio	Lower	Upper
91	100		
106	47.7	37.3	55.9
105	21.4	16.7	25.1

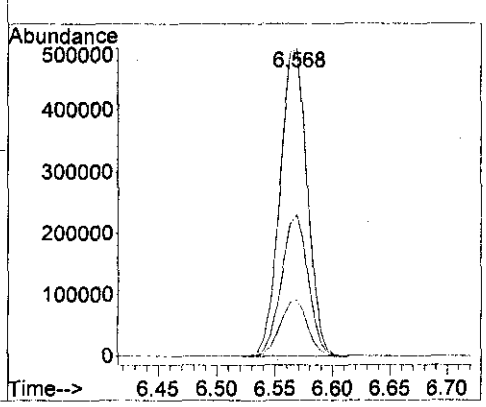




#17
o-Xylene
Concen: 1918.96 ppbv
RT: 6.568 min Scan# 1000
Delta R.T. 0.000 min
Lab File: HEN005.D
Acq: 16 Mar 2012 14:29

Tgt Ion: 91 Resp: 821086

Ion	Ratio	Lower	Upper
91	100		
106	45.0	35.8	53.8
105	18.0	14.2	21.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN006.D
Acq On : 16 Mar 2012 14:41
Operator : SJT
Sample : STD20120316-3 \ 500ppbv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 14:47:51 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 14:31:35 2012
Response via : Initial Calibration

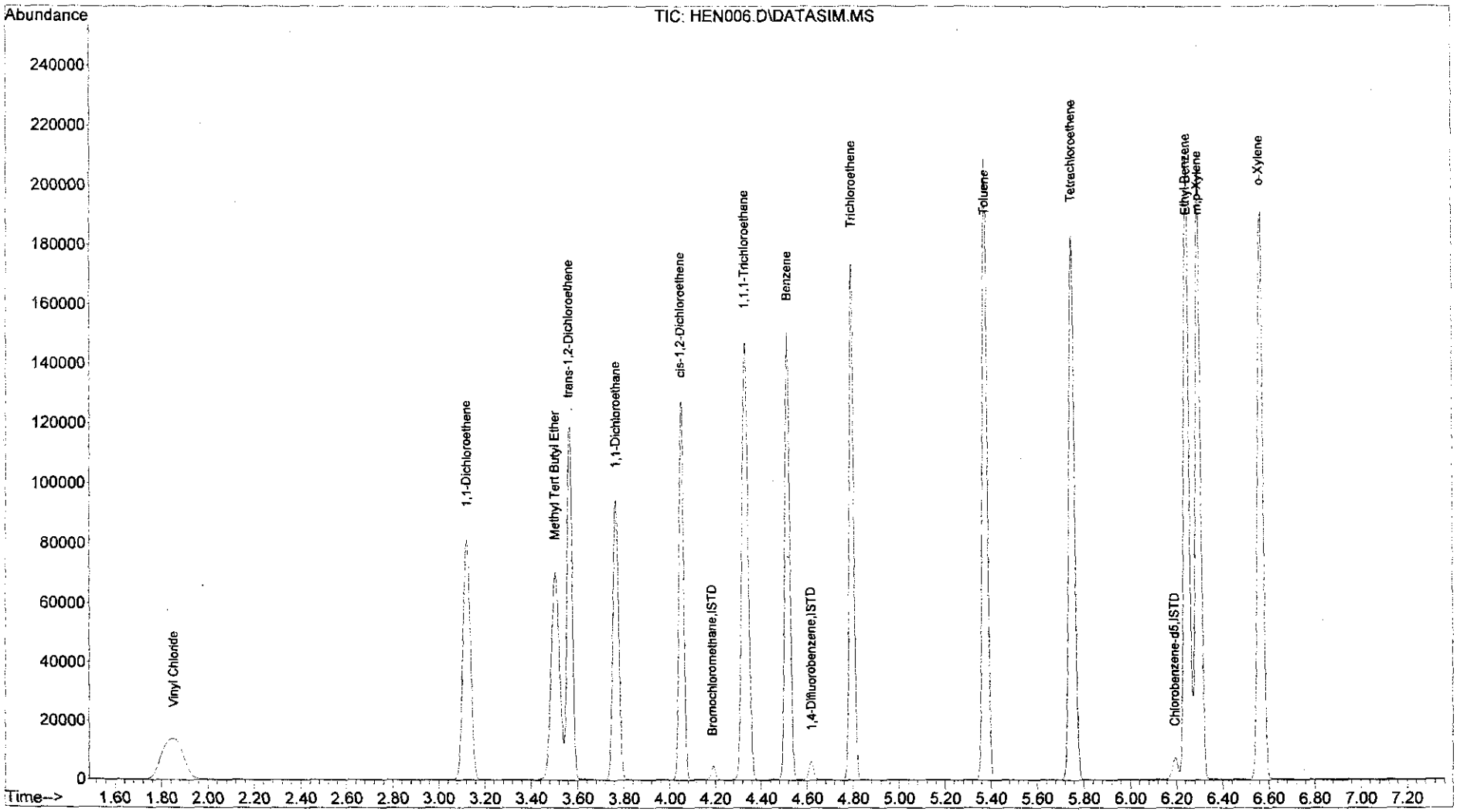
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.187	49	2549	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.620	114	6006	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.192	117	6292	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Vinyl Chloride	1.852	62	51137m	446.62	ppbv	
3) 1,1-Dichloroethene	3.123	61	98563	474.35	ppbv	100
4) Methyl Tert Butyl Ether	3.504	73	140392	447.21	ppbv	98
5) trans-1,2-Dichloroethene	3.564	61	89925	487.26	ppbv	99
6) 1,1-Dichloroethane	3.768	63	104369	460.51	ppbv	99
7) cis-1,2-Dichloroethene	4.050	61	84666	475.74	ppbv	99
8) 1,1,1-Trichloroethane	4.332	97	133728	441.93	ppbv	99
10) Benzene	4.516	78	152321	471.65	ppbv	100
11) Trichloroethene	4.796	130	80652	446.41	ppbv	99
13) Toluene	5.377	91	191059	440.71	ppbv	100
14) Tetrachloroethene	5.752	166	105287	459.59	ppbv	100
15) Ethyl Benzene	6.247	91	252051	453.40	ppbv	99
16) m,p-Xylene	6.296	91	185829	431.32	ppbv	99
17) o-Xylene	6.563	91	193195	428.63	ppbv	100

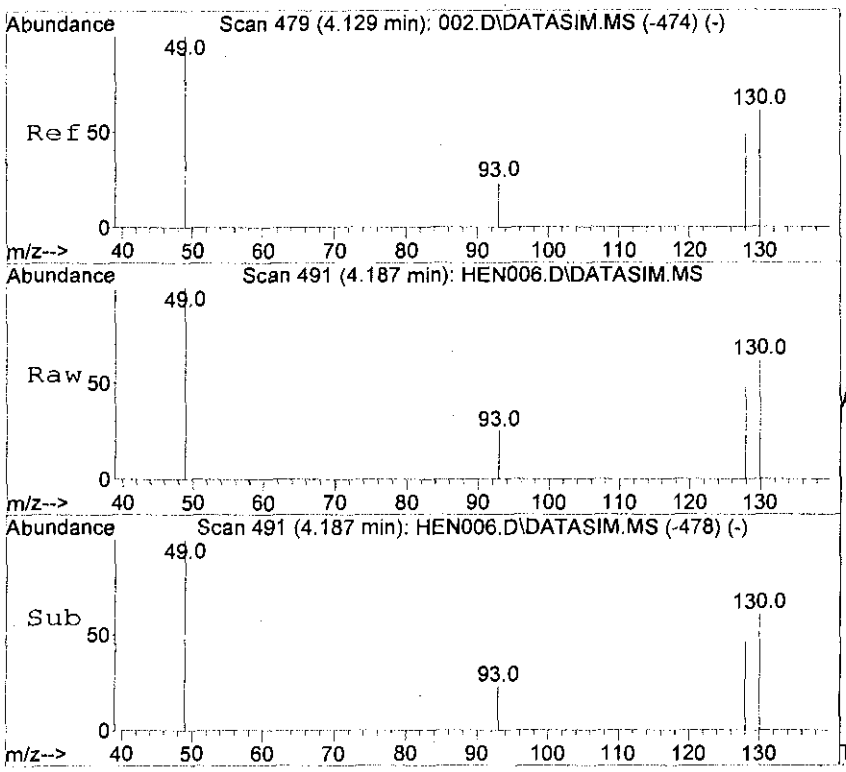
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN006.D
Acq On : 16 Mar 2012 14:41
Operator : SJT
Sample : STD20120316-3 \ 500ppbv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 14:47:51 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 14:31:35 2012
Response via : Initial Calibration

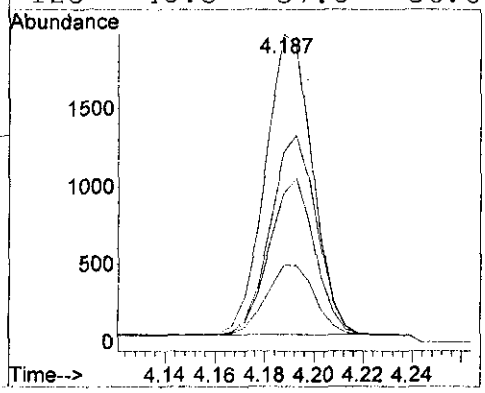


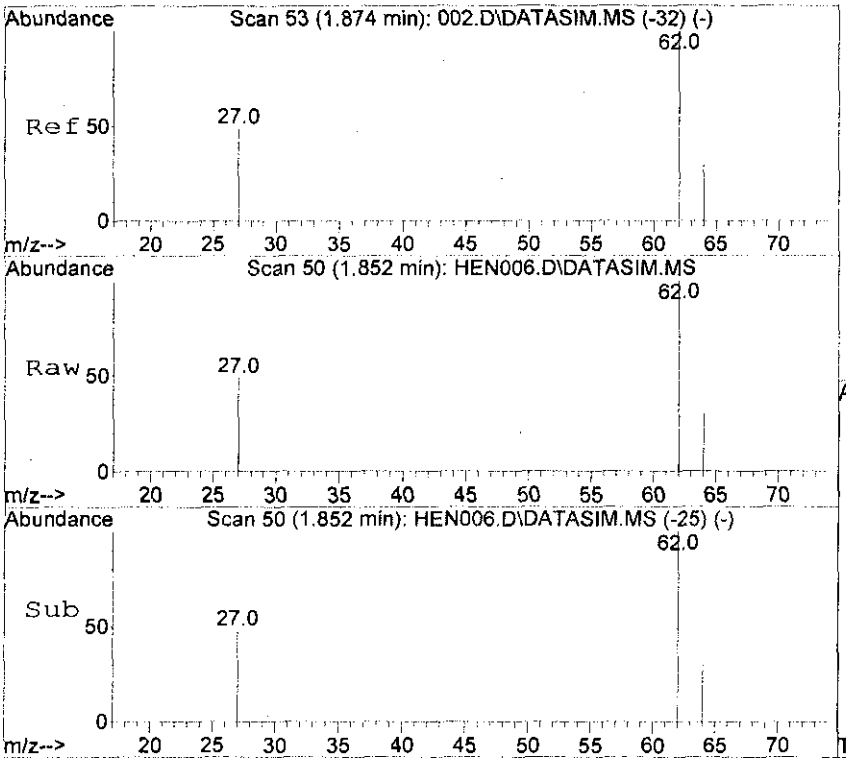


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.187 min Scan# 491
Delta R.T. -0.005 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 49 Resp: 2549

Ion	Ratio	Lower	Upper
49	100		
130	61.6	46.5	69.7
93	25.1	19.0	28.6
128	48.5	37.8	56.6

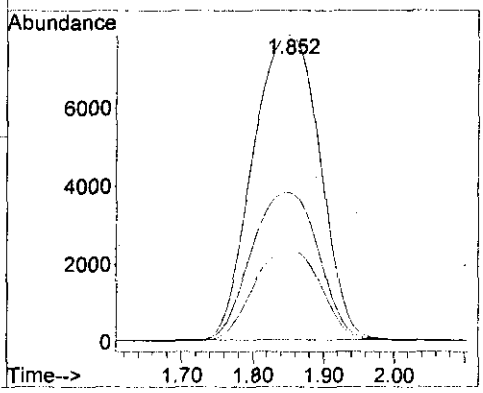


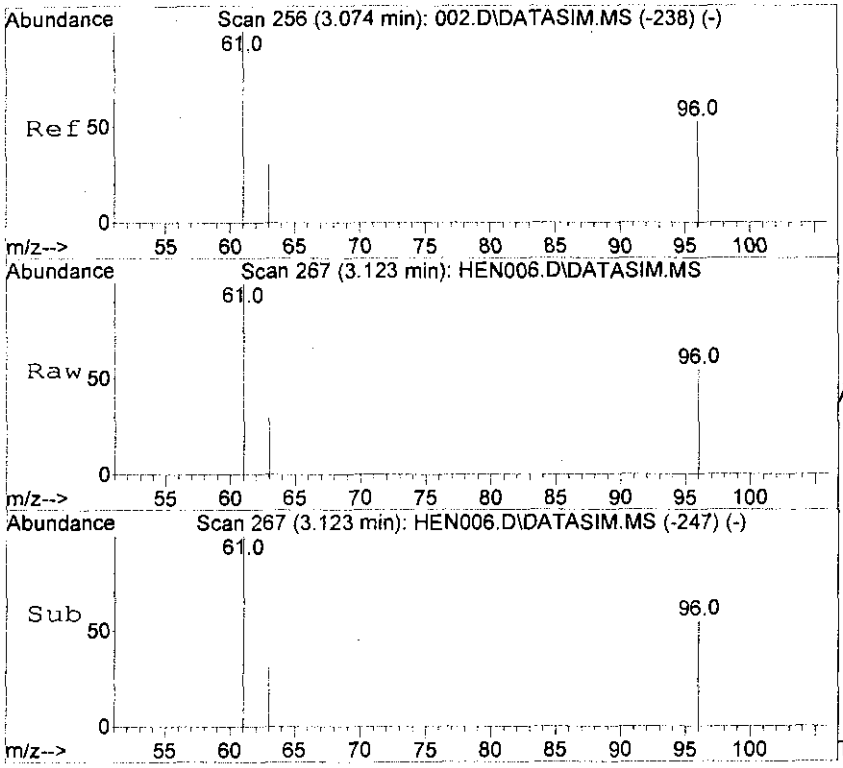


#2
Vinyl Chloride
Concen: 446.62 ppbv m
RT: 1.852 min Scan# 50
Delta R.T. -0.067 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 62 Resp: 51137

Ion	Ratio	Lower	Upper
62	100		
64	0.0	23.7	35.5#
27	0.0	39.8	59.8#

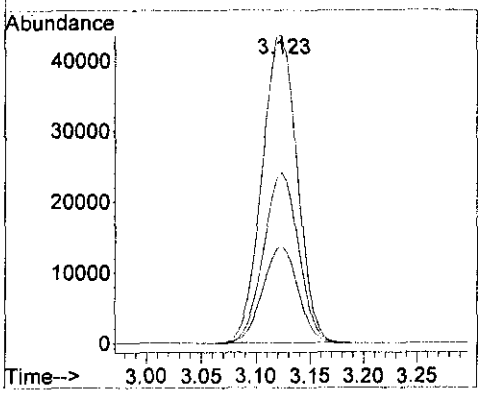


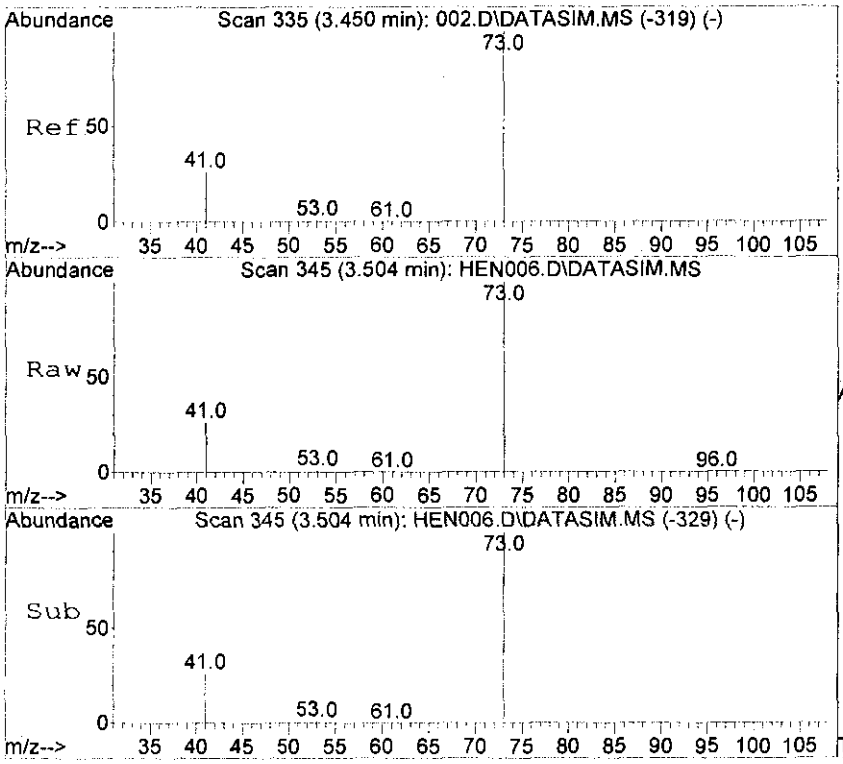


#3
1,1-Dichloroethene
Concen: 474.35 ppbv
RT: 3.123 min Scan# 267
Delta R.T. -0.013 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 61 Resp: 98563

Ion	Ratio	Lower	Upper
61	100		
96	54.8	43.8	65.6
63	31.4	25.1	37.7

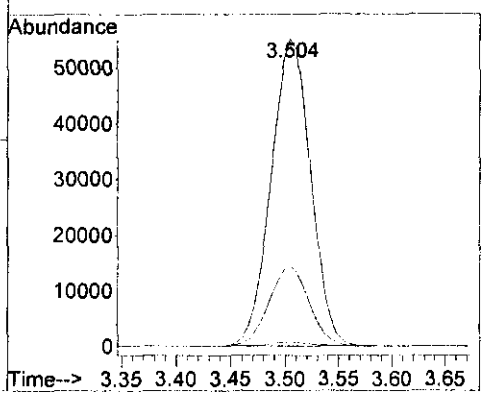


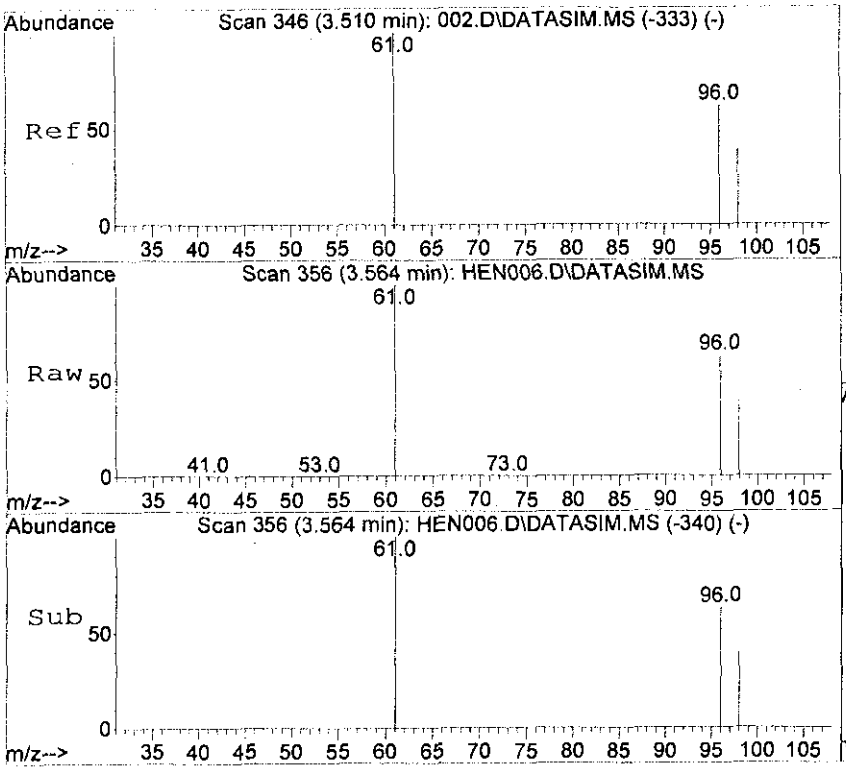


#4
Methyl Tert Butyl Ether
Concen: 447.21 ppbv
RT: 3.504 min Scan# 345
Delta R.T. -0.011 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 73 Resp: 140392

Ion	Ratio	Lower	Upper
73	100		
53	1.3	1.1	1.7
41	26.2	21.8	32.6

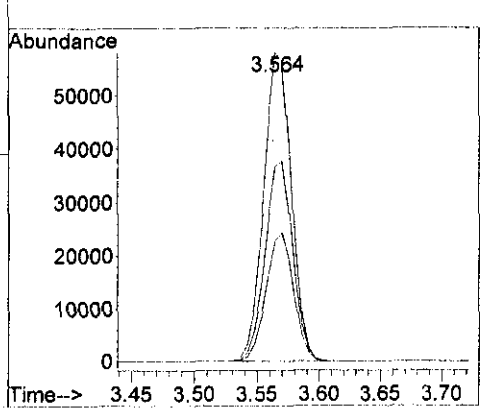


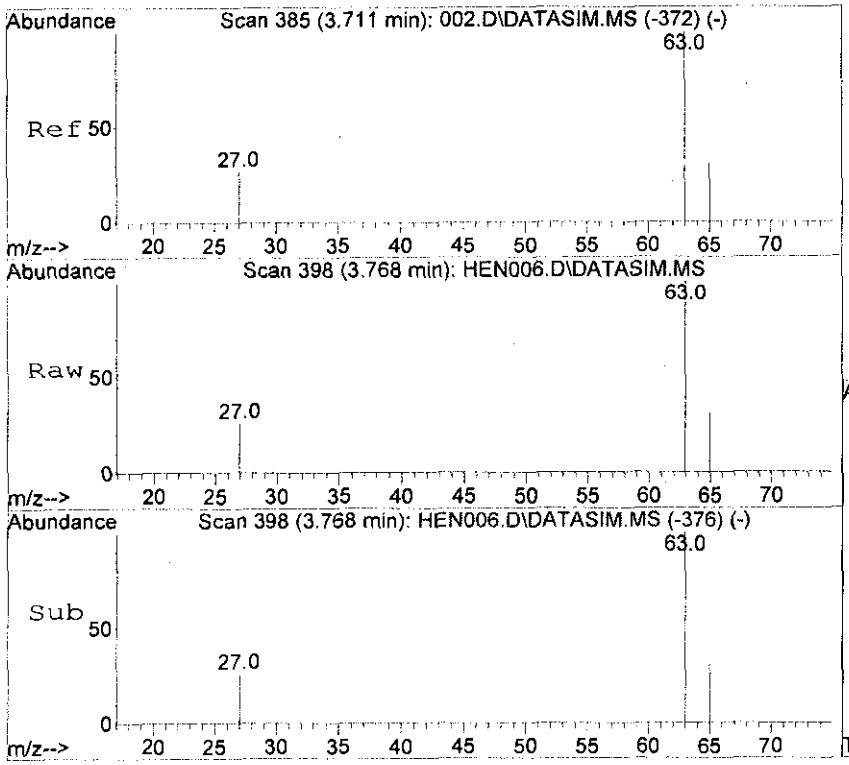


#5
trans-1,2-Dichloroethene
Concen: 487.26 ppbv
RT: 3.564 min Scan# 356
Delta R.T. -0.011 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 61 Resp: 89925

Ion	Ratio	Lower	Upper
61	100		
96	64.8	51.3	76.9
98	41.4	32.7	49.1

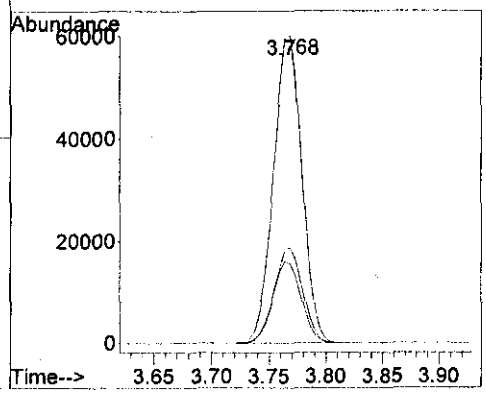


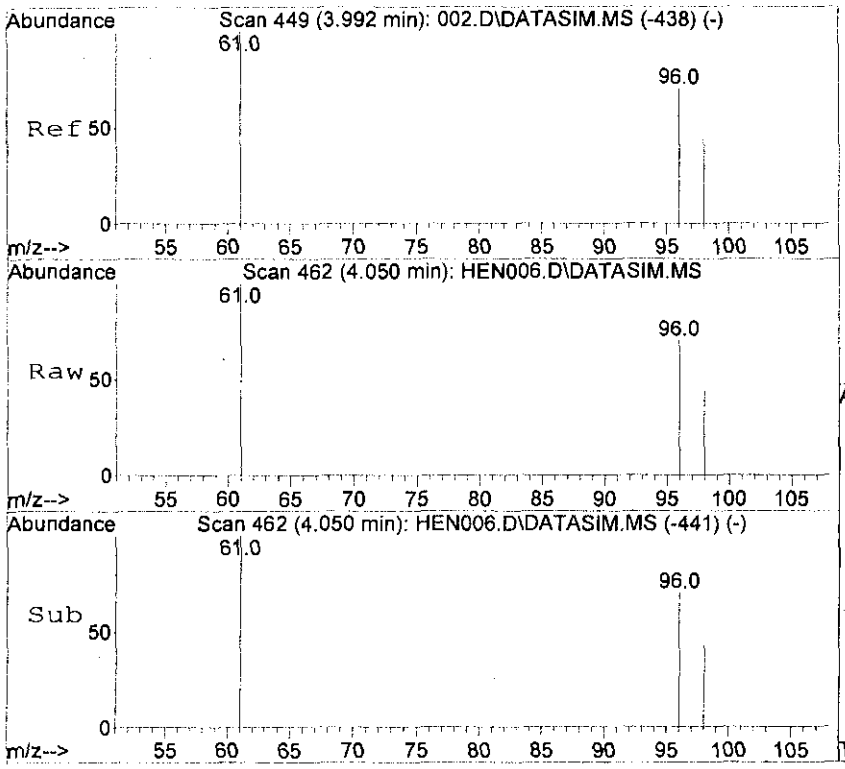


#6
1,1-Dichloroethane
Concen: 460.51 ppbv
RT: 3.768 min Scan# 398
Delta R.T. -0.004 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 63 Resp: 104369

Ion	Ratio	Lower	Upper
63	100		
65	30.9	24.7	37.1
27	26.7	22.0	33.0

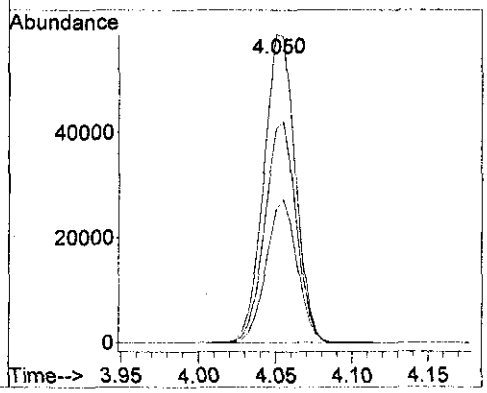


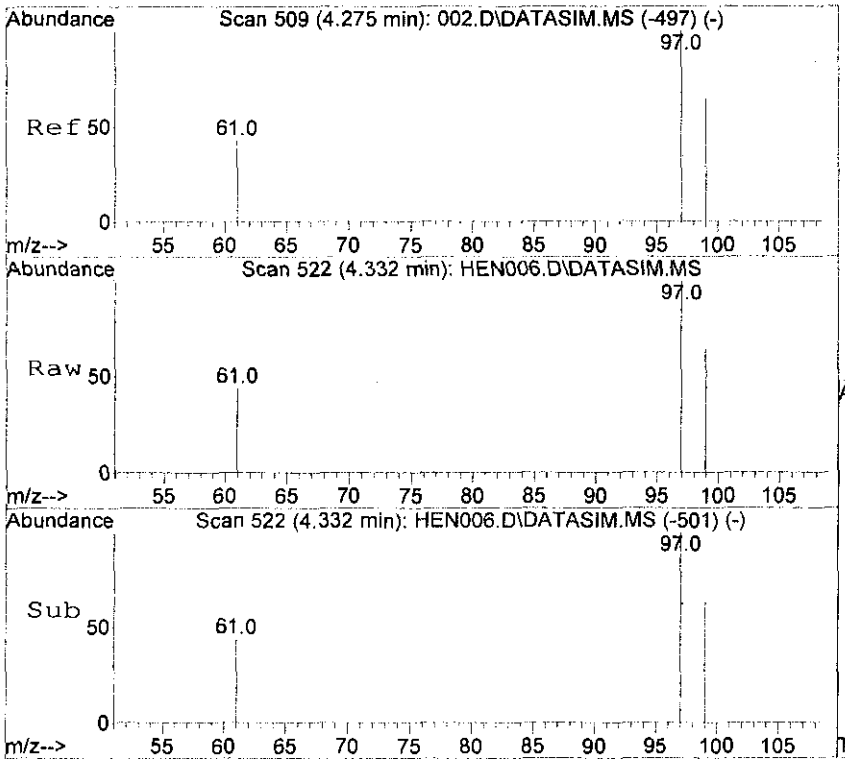


#7
cis-1,2-Dichloroethene
Concen: 475.74 ppbv
RT: 4.050 min Scan# 462
Delta R.T. -0.009 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 61 Resp: 84666

Ion	Ratio	Lower	Upper
61	100		
96	71.1	56.2	84.4
98	45.7	36.0	54.0

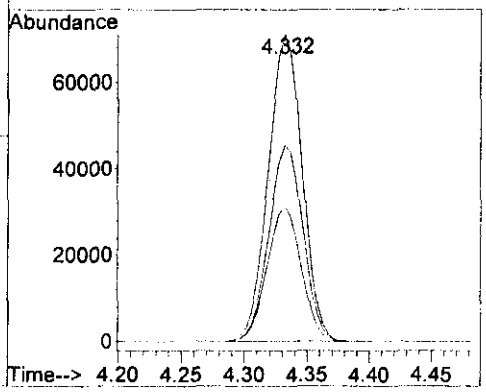


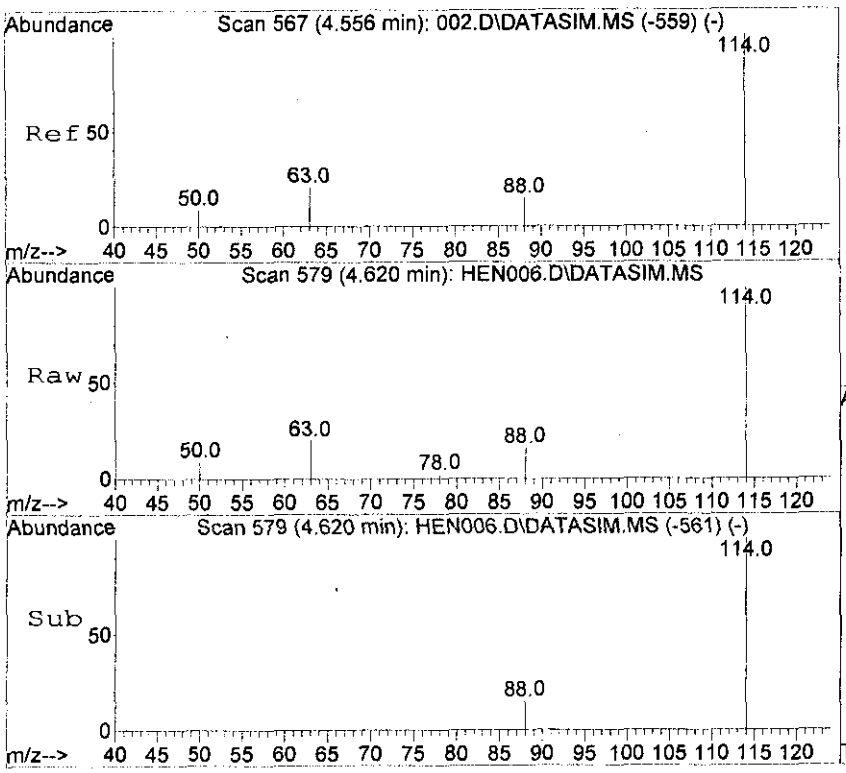


#8
1,1,1-Trichloroethane
Concen: 441.93 ppbv
RT: 4.332 min Scan# 522
Delta R.T. -0.004 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 97 Resp: 133728

Ion	Ratio	Lower	Upper
97	100		
99	64.5	51.5	77.3
61	44.0	35.8	53.8

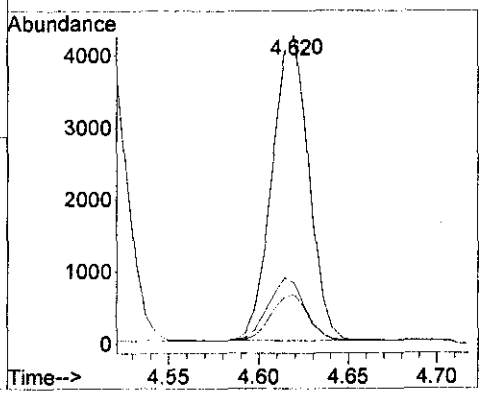


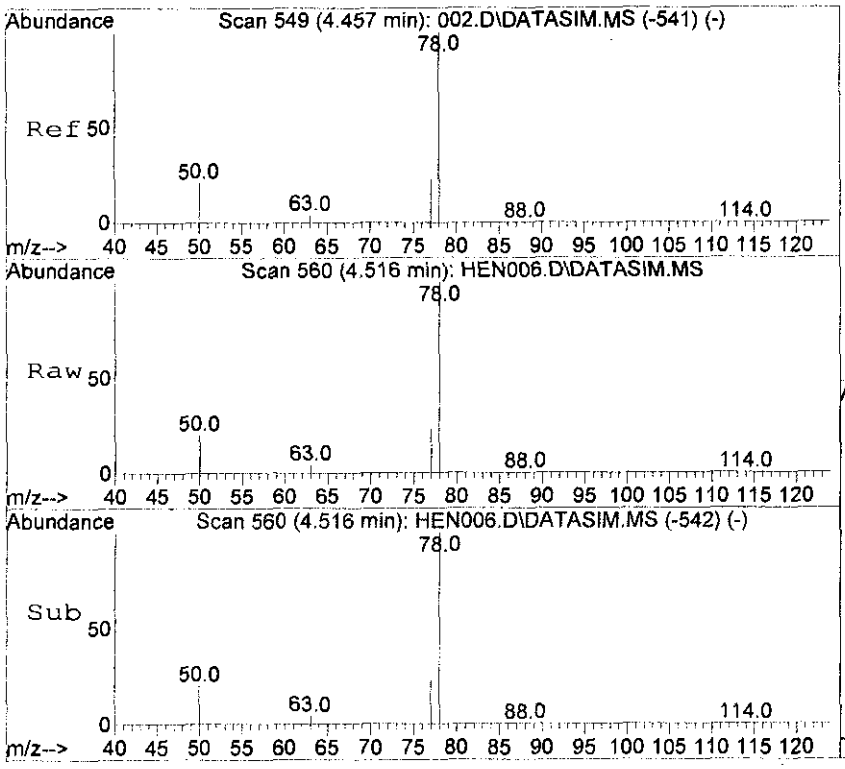


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.620 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion:114 Resp: 6006

Ion	Ratio	Lower	Upper
114	100		
63	20.5	16.7	25.1
88	15.2	12.2	18.2

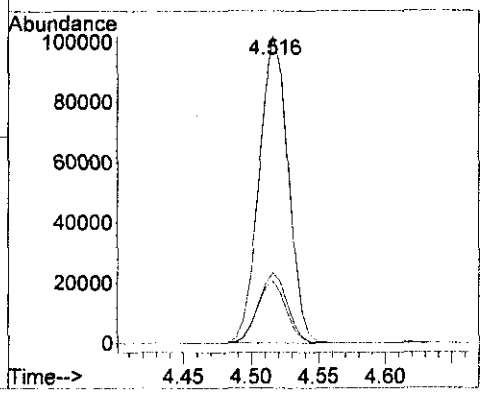


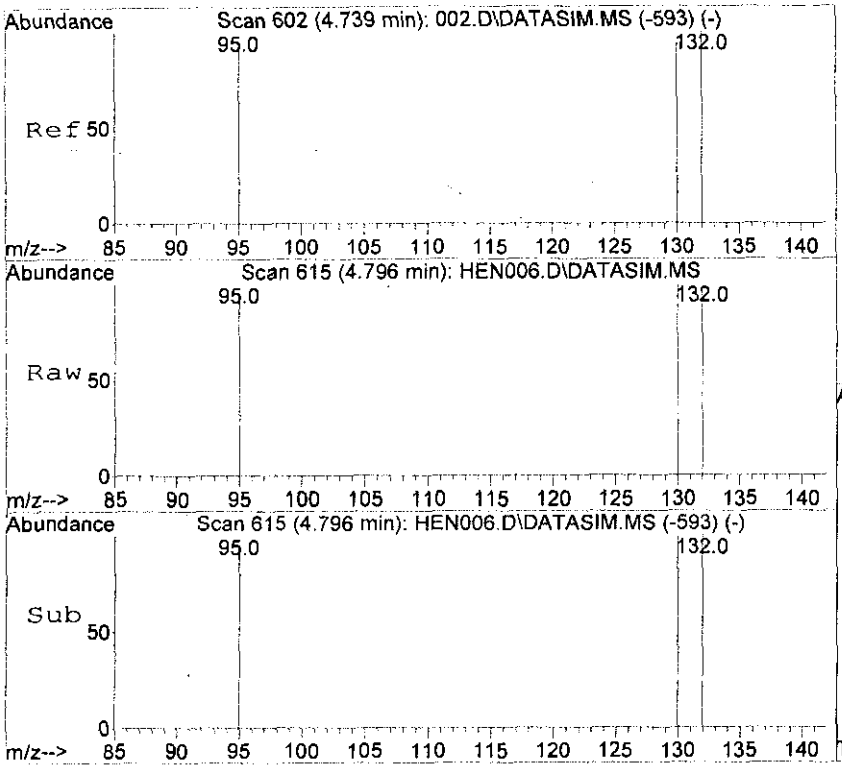


#10
Benzene
Concen: 471.65 ppbv
RT: 4.516 min Scan# 560
Delta R.T. -0.005 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 78 Resp: 152321

Ion	Ratio	Lower	Upper
78	100		
77	22.9	18.2	27.4
50	20.1	15.9	23.9

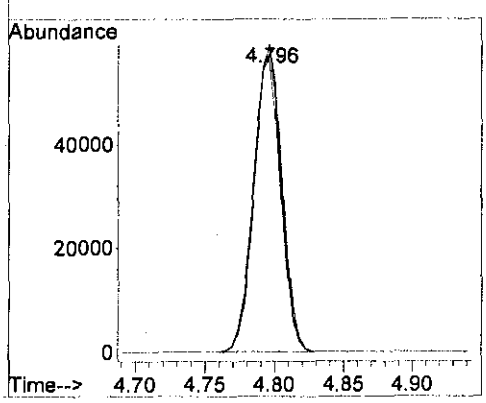


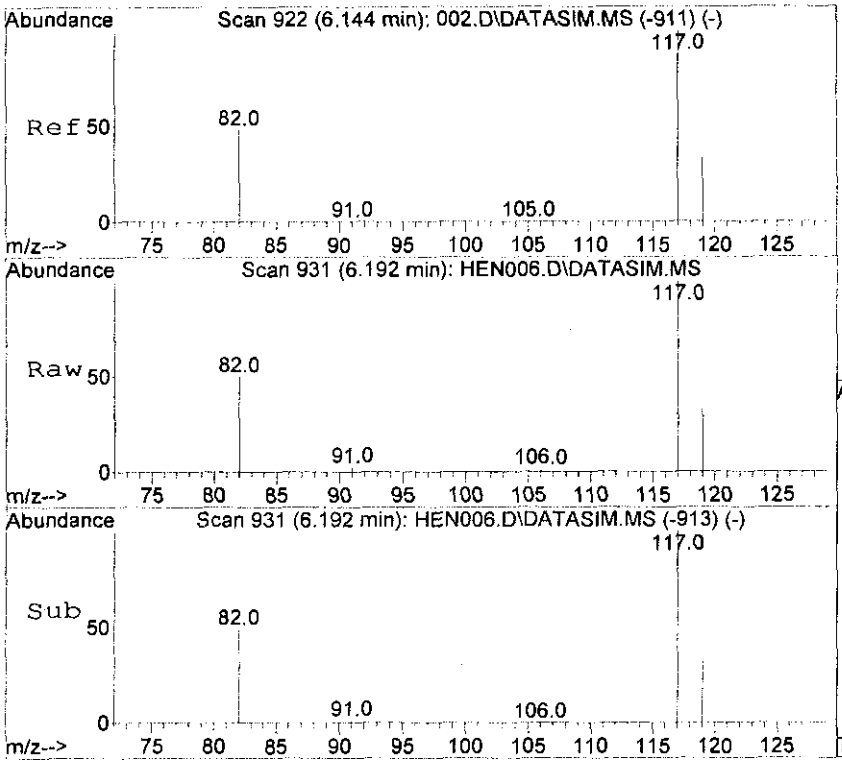


#11
Trichloroethene
Concen: 446.41 ppbv
RT: 4.796 min Scan# 615
Delta R.T. 0.000 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion:130 Resp: 80652

Ion	Ratio	Lower	Upper
130	100		
132	100.8	80.4	120.6
95	96.7	78.6	118.0

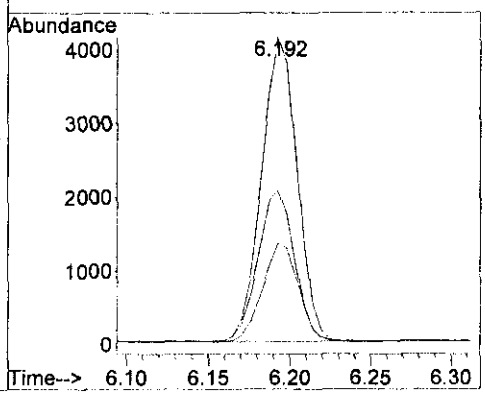


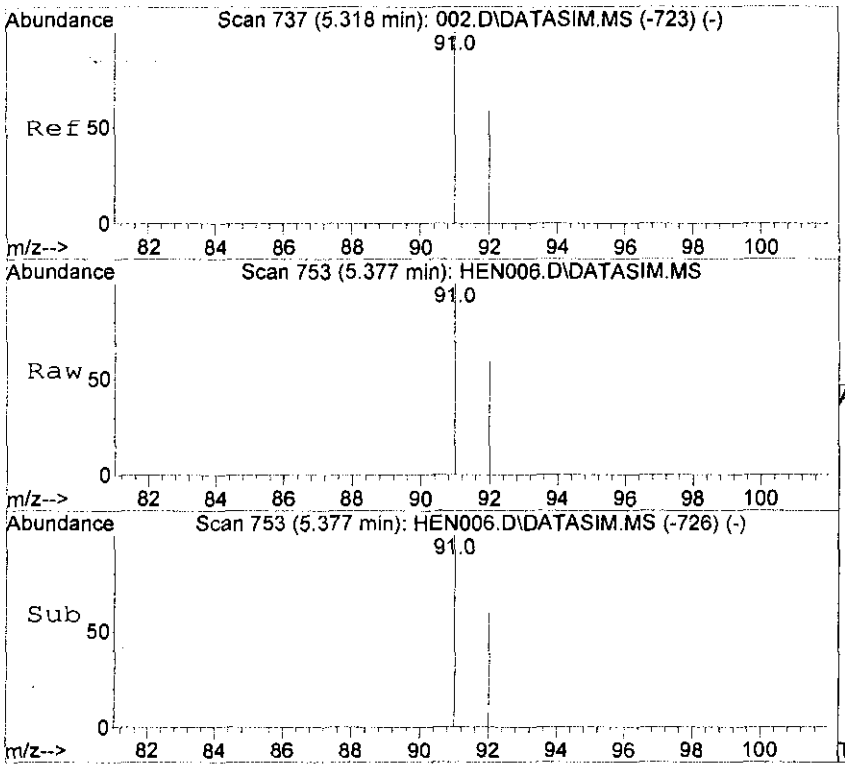


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.192 min Scan# 931
Delta R.T. 0.000 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion:117 Resp: 6292

Ion	Ratio	Lower	Upper
117	100		
82	50.4	41.4	62.0
119	32.4	25.8	38.6

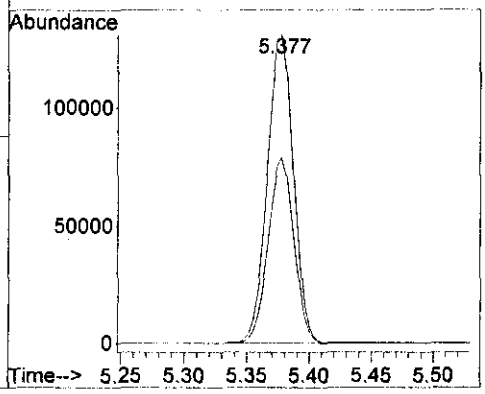


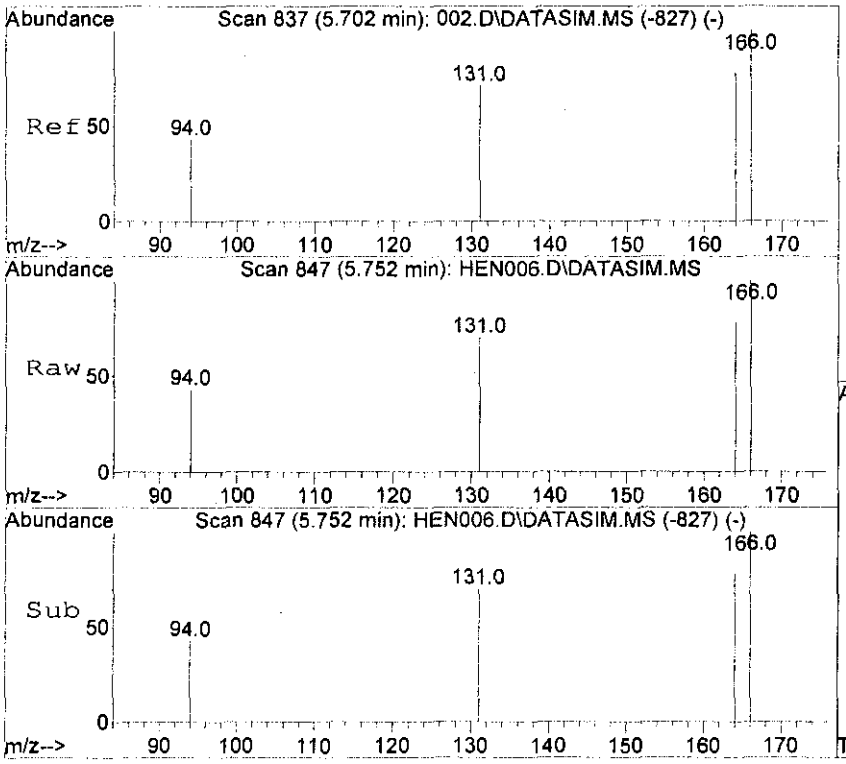


#13
Toluene
Concen: 440.71 ppbv
RT: 5.377 min Scan# 753
Delta R.T. 0.000 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 91 Resp: 191059

Ion	Ratio	Lower	Upper
91	100		
92	59.3	47.4	71.2

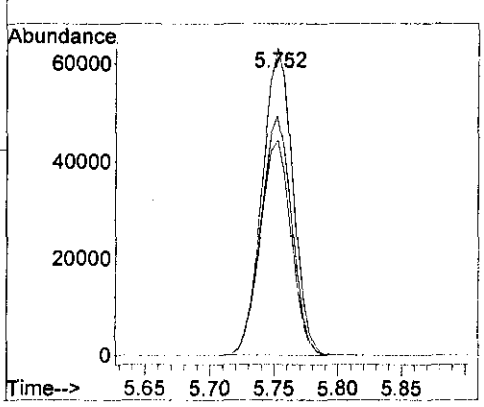


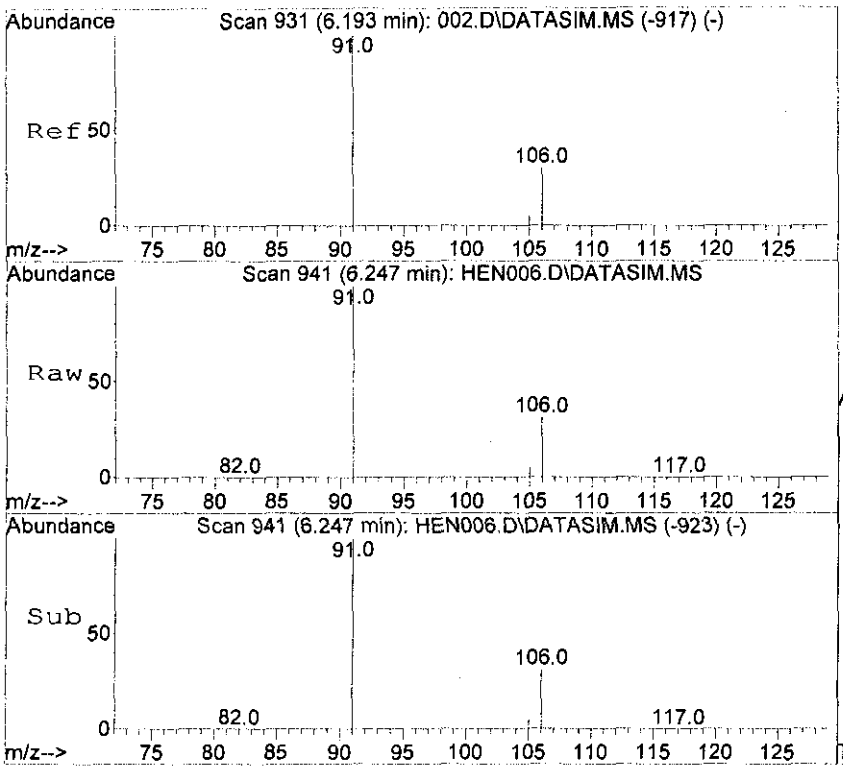


#14
Tetrachloroethene
Concen: 459.59 ppbv
RT: 5.752 min Scan# 847
Delta R.T. 0.000 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion:166 Resp: 105287

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.5	93.7
131	70.8	57.0	85.4

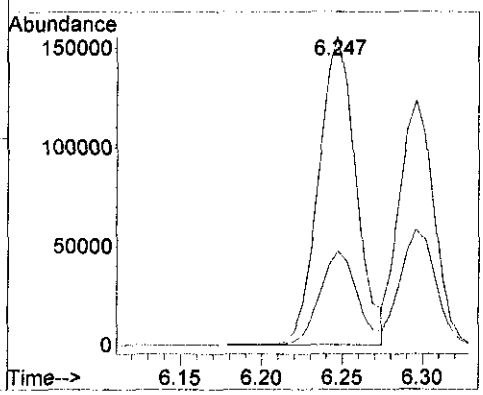


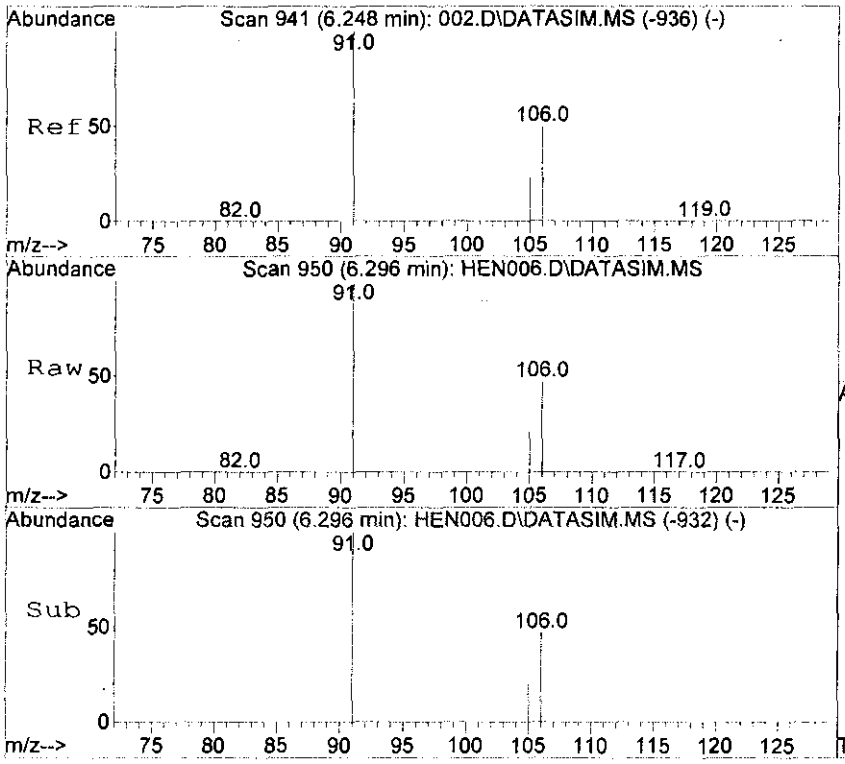


#15
Ethyl Benzene
Concen: 453.40 ppbv
RT: 6.247 min Scan# 941
Delta R.T. 0.000 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 91 Resp: 252051

Ion	Ratio	Lower	Upper
91	100		
106	30.6	23.9	35.9

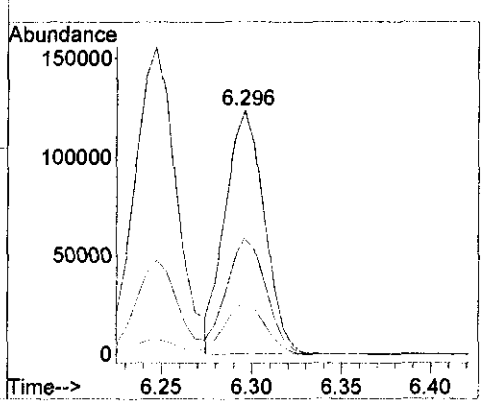


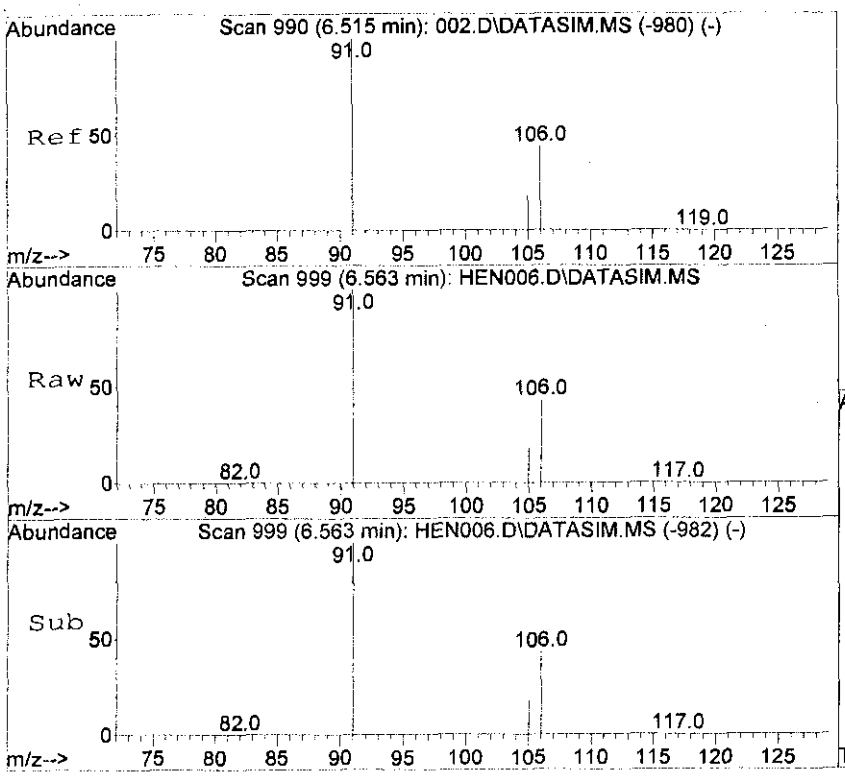


#16
m,p-Xylene
Concen: 431.32 ppbv
RT: 6.296 min Scan# 950
Delta R.T. 0.000 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 91 Resp: 185829

Ion	Ratio	Lower	Upper
91	100		
106	47.3	37.3	55.9
105	21.2	16.7	25.1

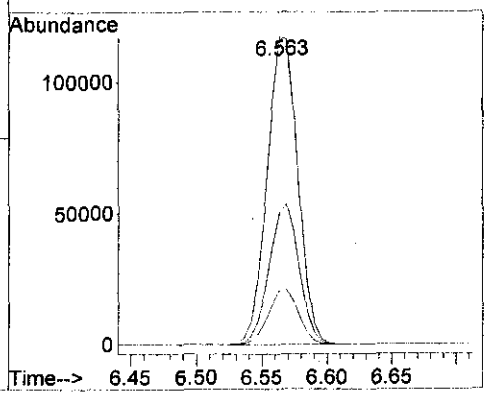




#17
o-Xylene
Concen: 428.63 ppbv
RT: 6.563 min Scan# 999
Delta R.T. -0.005 min
Lab File: HEN006.D
Acq: 16 Mar 2012 14:41

Tgt Ion: 91 Resp: 193195

Ion	Ratio	Lower	Upper
91	100		
106	44.6	35.8	53.8
105	17.9	14.2	21.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN007.D
Acq On : 16 Mar 2012 14:52
Operator : SJT
Sample : STD20120316-4 \ 100ppbv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 14:59:44 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 14:31:35 2012
Response via : Initial Calibration

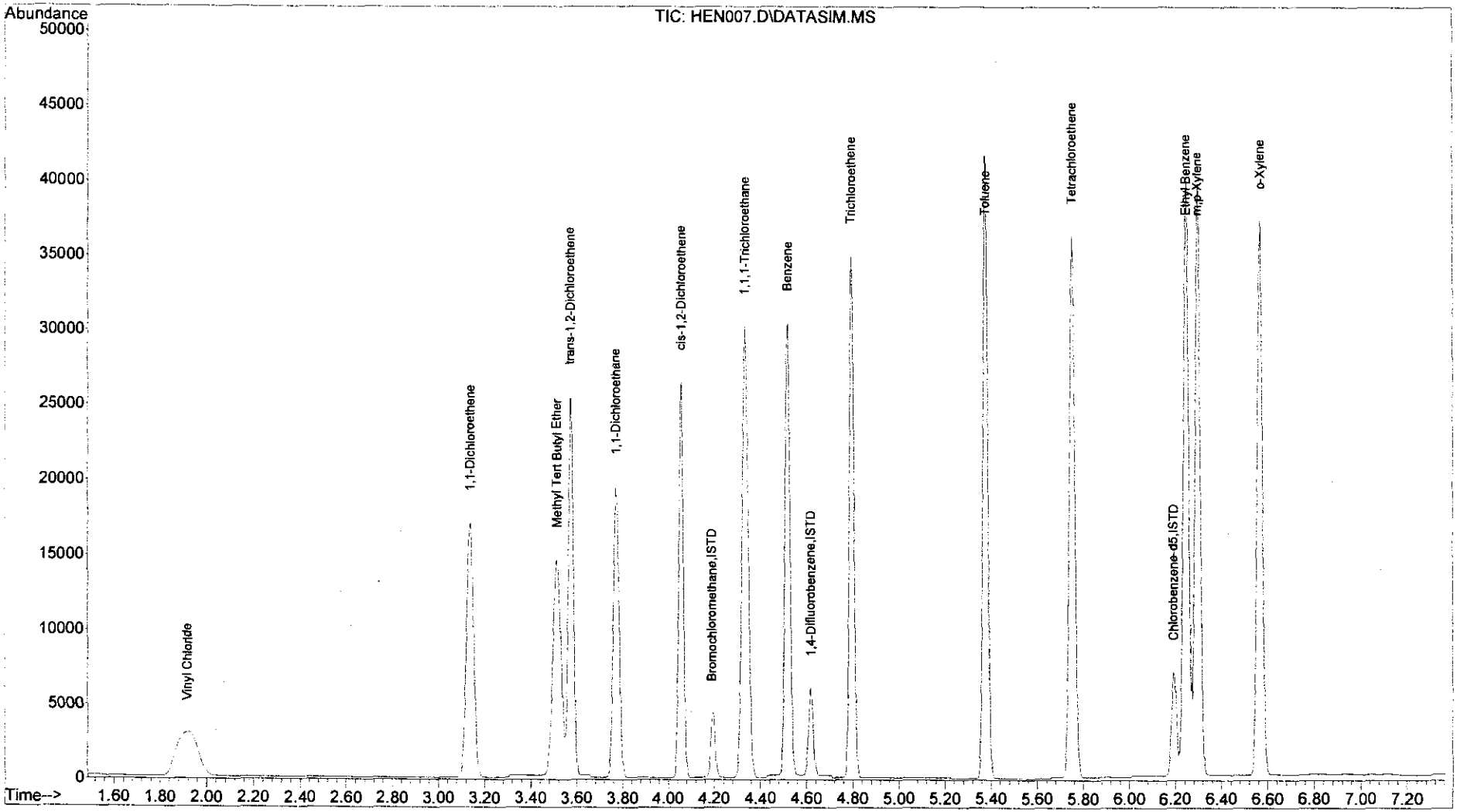
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.193	49	2413	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.620	114	5717	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.192	117	5979	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Vinyl Chloride	1.919	62	10689	98.62	ppbv	99
3) 1,1-Dichloroethene	3.141	61	20191	102.65	ppbv	100
4) Methyl Tert Butyl Ether	3.515	73	28411	95.60	ppbv	99
5) trans-1,2-Dichloroethene	3.575	61	18386	105.24	ppbv	99
6) 1,1-Dichloroethane	3.772	63	21197	98.80	ppbv	99
7) cis-1,2-Dichloroethene	4.059	61	17533	104.07	ppbv	99
8) 1,1,1-Trichloroethane	4.336	97	26947	94.07	ppbv	100
10) Benzene	4.521	78	30970	100.74	ppbv	99
11) Trichloroethene	4.796	130	16385	95.28	ppbv	99
13) Toluene	5.377	91	38046	92.35	ppbv	100
14) Tetrachloroethene	5.752	166	20809	95.59	ppbv	100
15) Ethyl Benzene	6.247	91	48150	91.15	ppbv	100
16) m,p-Xylene	6.296	91	35862	87.60	ppbv	99
17) o-Xylene	6.568	91	36890	86.13	ppbv	100

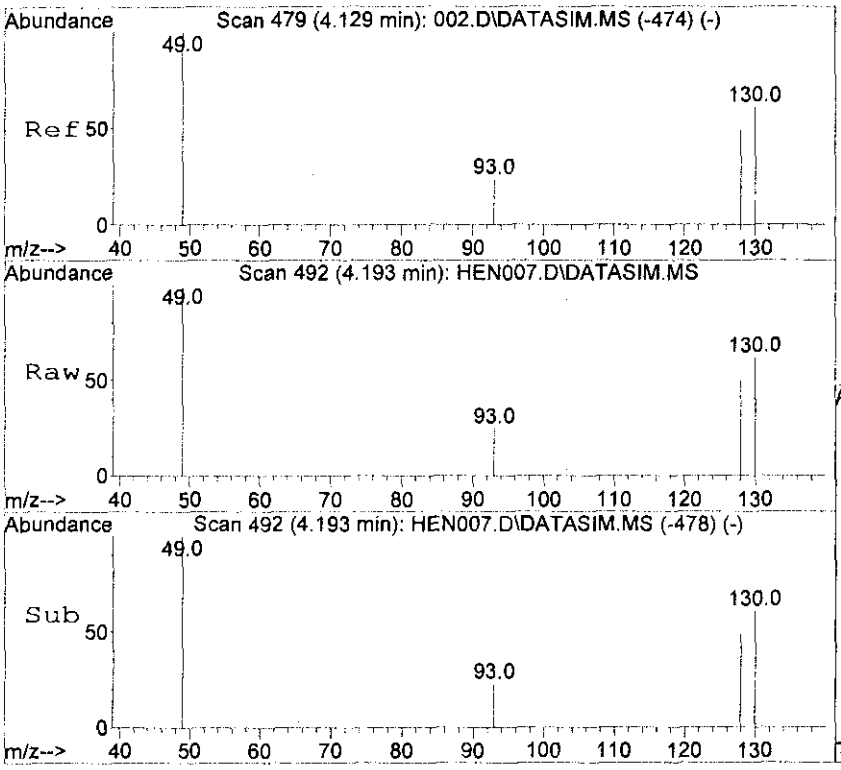
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN007.D
Acq On : 16 Mar 2012 14:52
Operator : SJT
Sample : STD20120316-4 \ 100ppbv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 14:59:44 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 14:31:35 2012
Response via : Initial Calibration

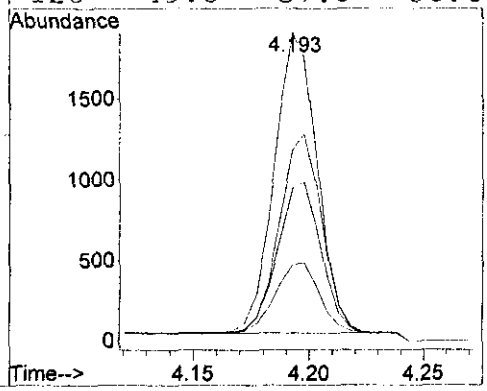


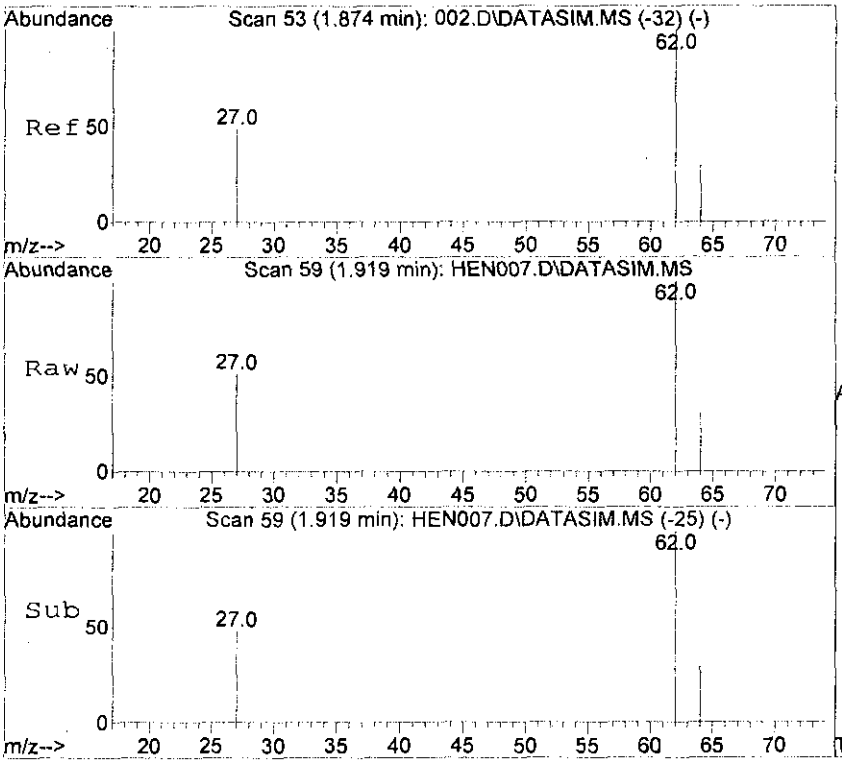


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.193 min Scan# 492
Delta R.T. 0.001 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 49 Resp: 2413

Ion	Ratio	Lower	Upper
49	100		
130	62.0	46.5	69.7
93	24.9	19.0	28.6
128	49.8	37.8	56.6

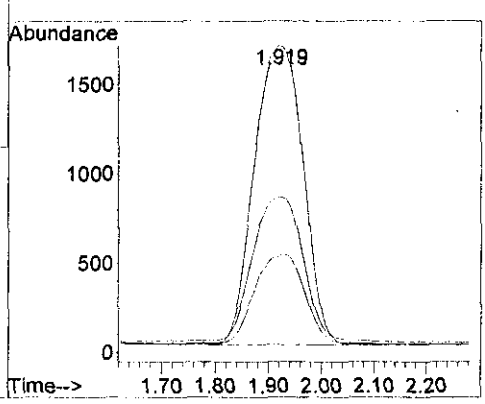


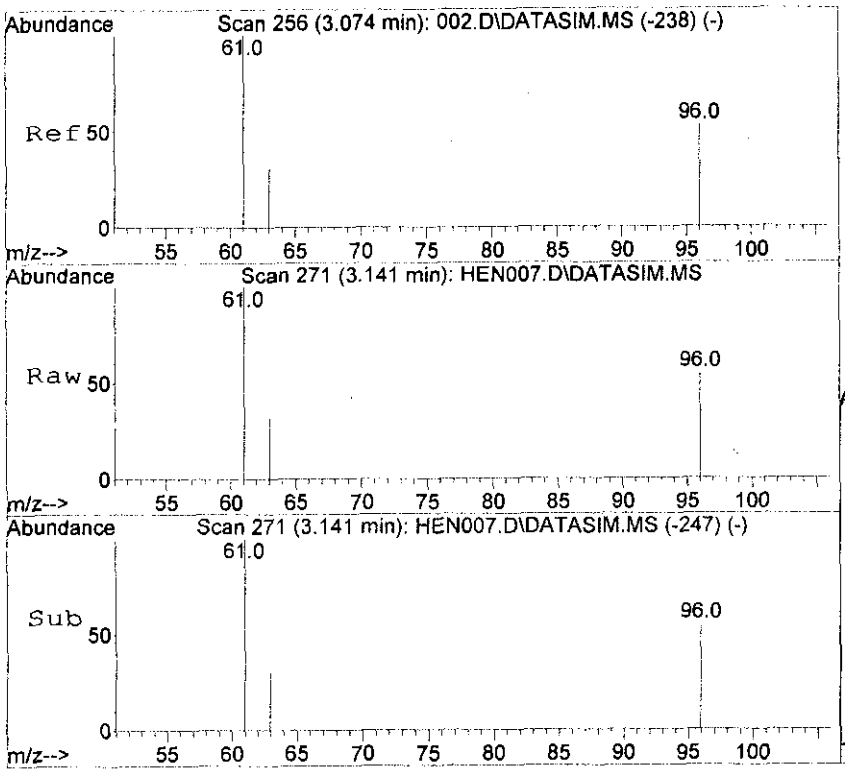


#2
Vinyl Chloride
Concen: 98.62 ppbv
RT: 1.919 min Scan# 59
Delta R.T. 0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 62 Resp: 10689

Ion	Ratio	Lower	Upper
62	100		
64	30.6	23.7	35.5
27	50.2	39.8	59.8

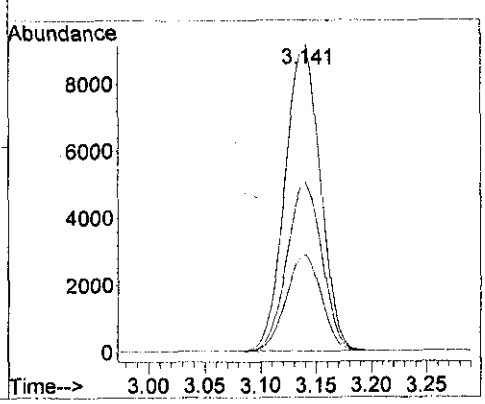


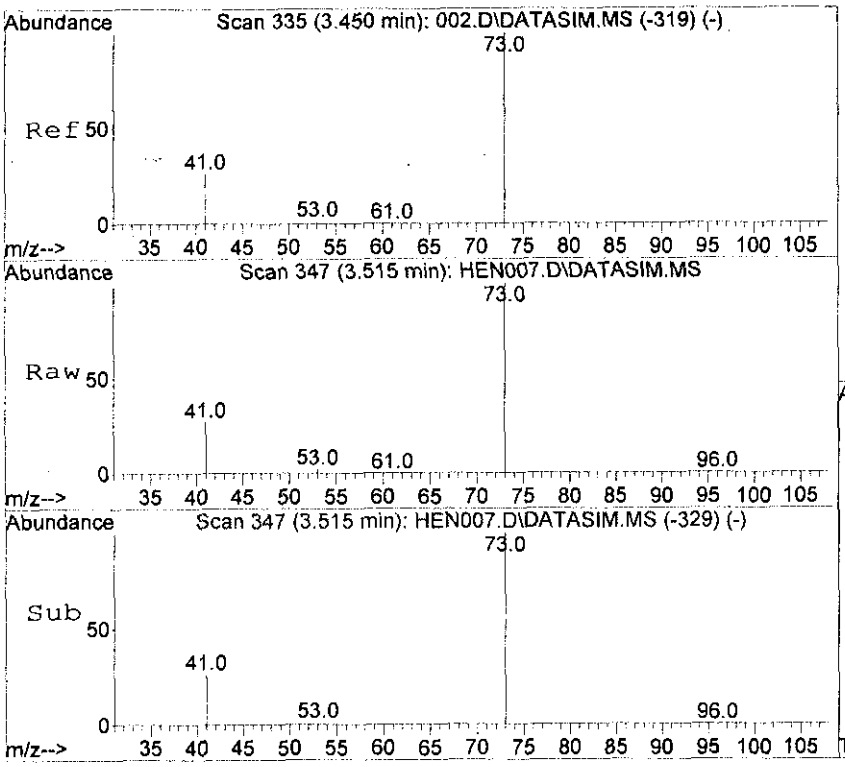


#3
1,1-Dichloroethene
Concen: 102.65 ppbv
RT: 3.141 min Scan# 271
Delta R.T. 0.005 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 61 Resp: 20191

Ion	Ratio	Lower	Upper
61	100		
96	54.8	43.8	65.6
63	31.3	25.1	37.7

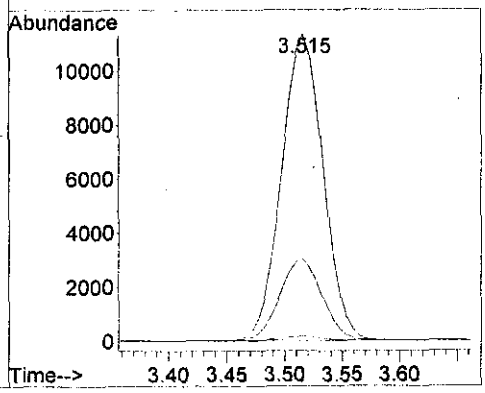


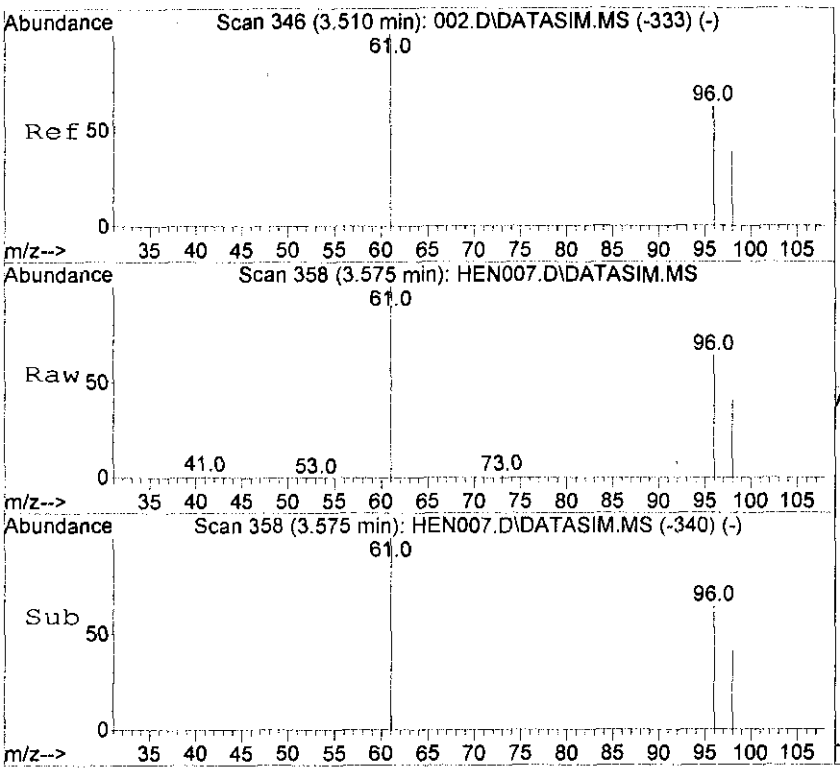


#4
Methyl Tert Butyl Ether
Concen: 95.60 ppbv
RT: 3.515 min Scan# 347
Delta R.T. 0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 73 Resp: 28411

Ion	Ratio	Lower	Upper
73	100		
53	1.4	1.1	1.7
41	26.7	21.8	32.6

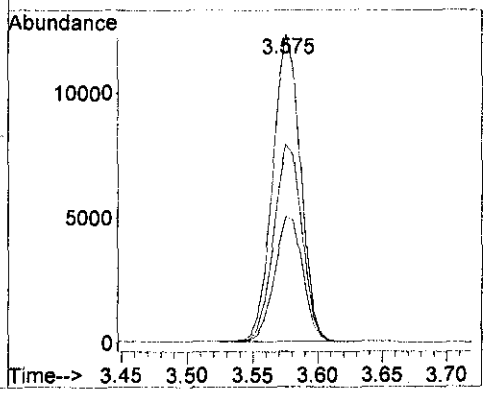


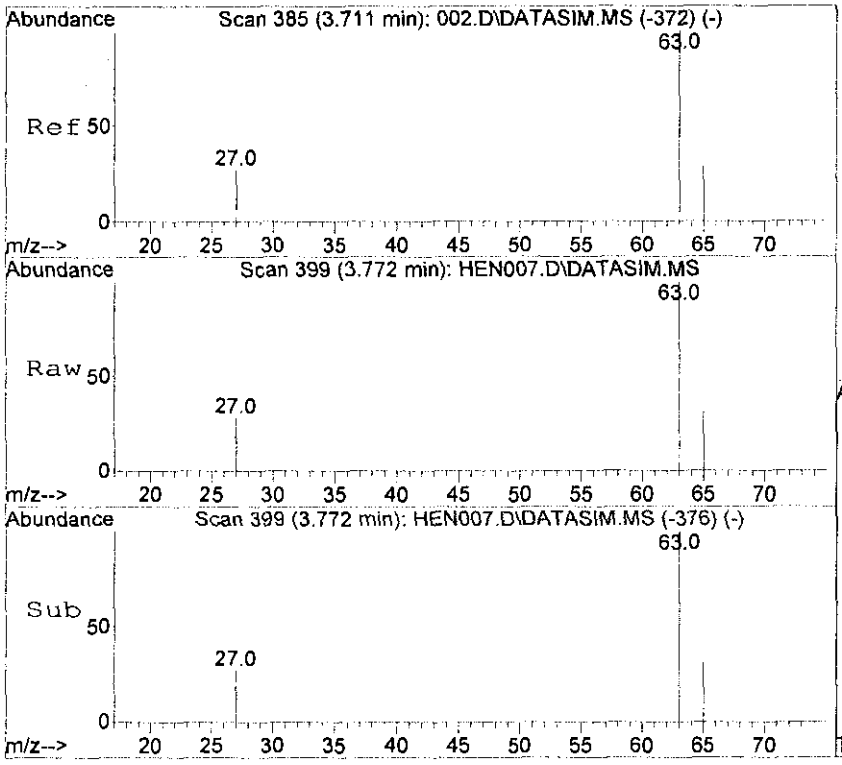


#5
trans-1,2-Dichloroethene
Concen: 105.24 ppbv
RT: 3.575 min Scan# 358
Delta R.T. 0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 61 Resp: 18386

Ion	Ratio	Lower	Upper
61	100		
96	64.9	51.3	76.9
98	41.3	32.7	49.1

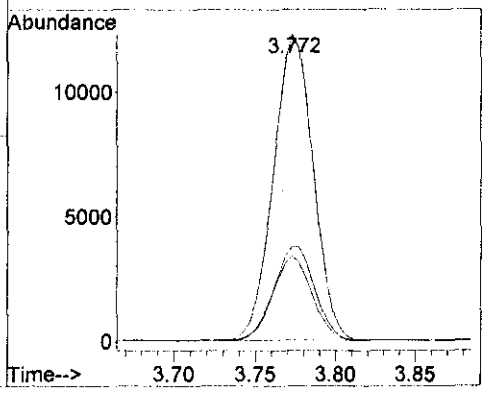


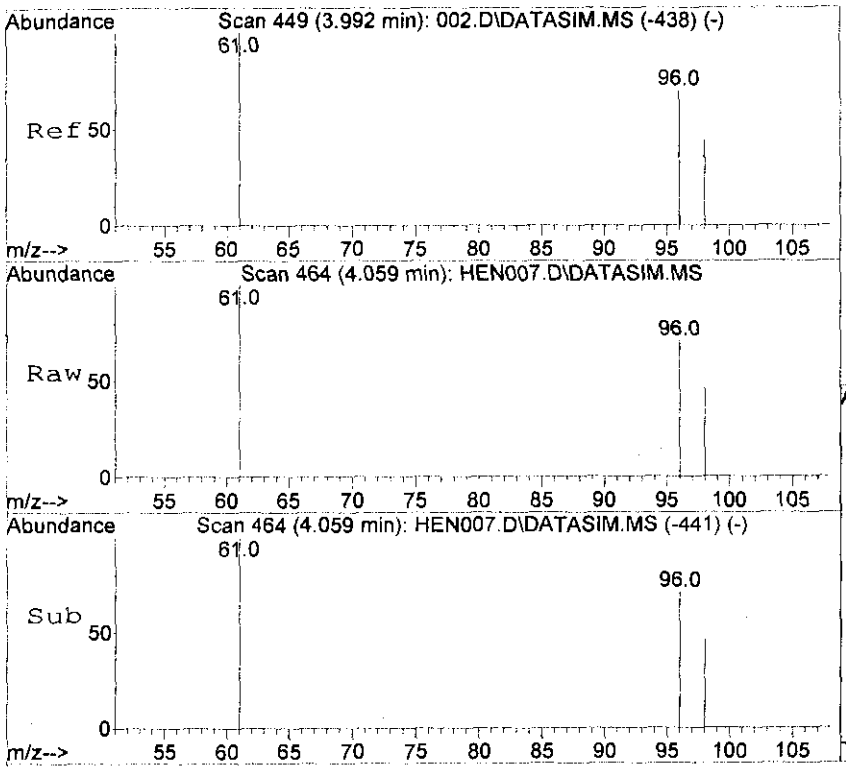


#6
1,1-Dichloroethane
Concen: 98.80 ppbv
RT: 3.772 min Scan# 399
Delta R.T. 0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 63 Resp: 21197

Ion	Ratio	Lower	Upper
63	100		
65	31.1	24.7	37.1
27	27.0	22.0	33.0

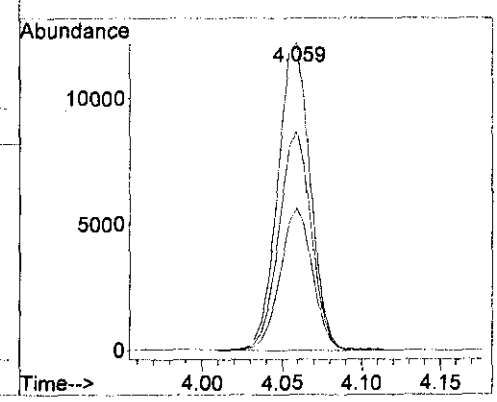


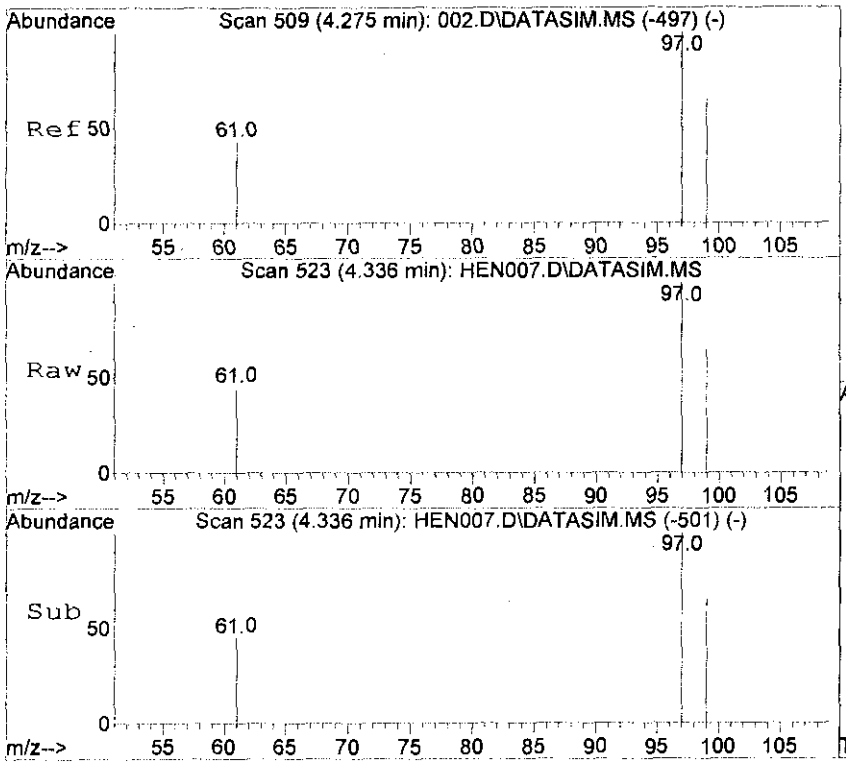


#7
cis-1,2-Dichloroethene
Concen: 104.07 ppbv
RT: 4.059 min Scan# 464
Delta R.T. 0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 61 Resp: 17533

Ion	Ratio	Lower	Upper
61	100		
96	70.9	56.2	84.4
98	46.2	36.0	54.0

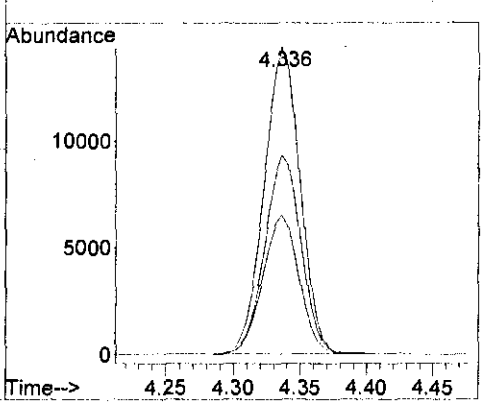


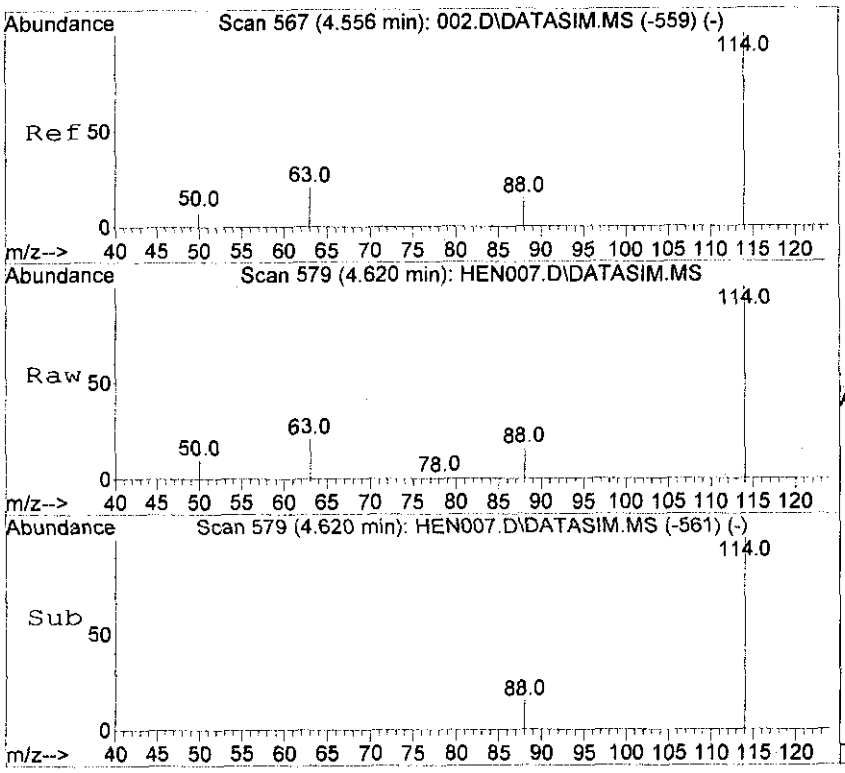


#8
1,1,1-Trichloroethane
Concen: 94.07 ppbv
RT: 4.336 min Scan# 523
Delta R.T. 0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 97 Resp: 26947

Ion	Ratio	Lower	Upper
97	100		
99	64.7	51.5	77.3
61	45.1	35.8	53.8

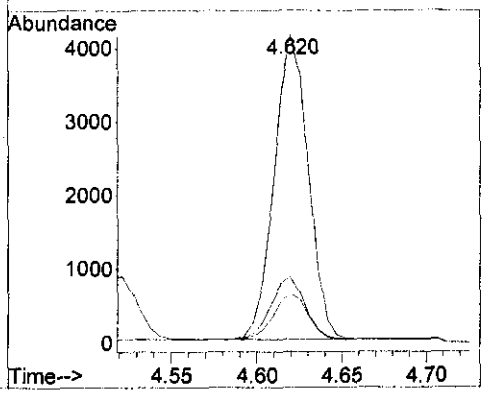


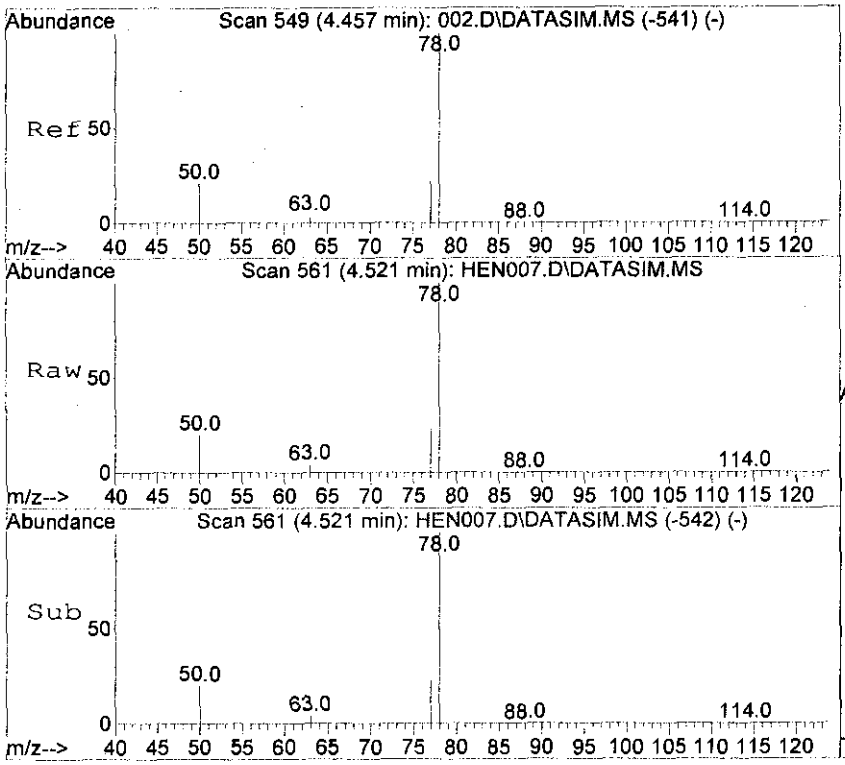


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.620 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion:114 Resp: 5717

Ion	Ratio	Lower	Upper
114	100		
63	20.2	16.7	25.1
88	14.8	12.2	18.2

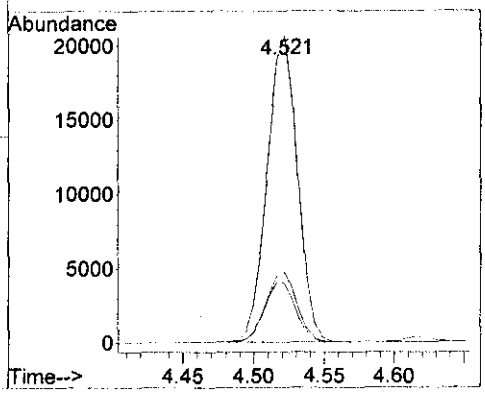


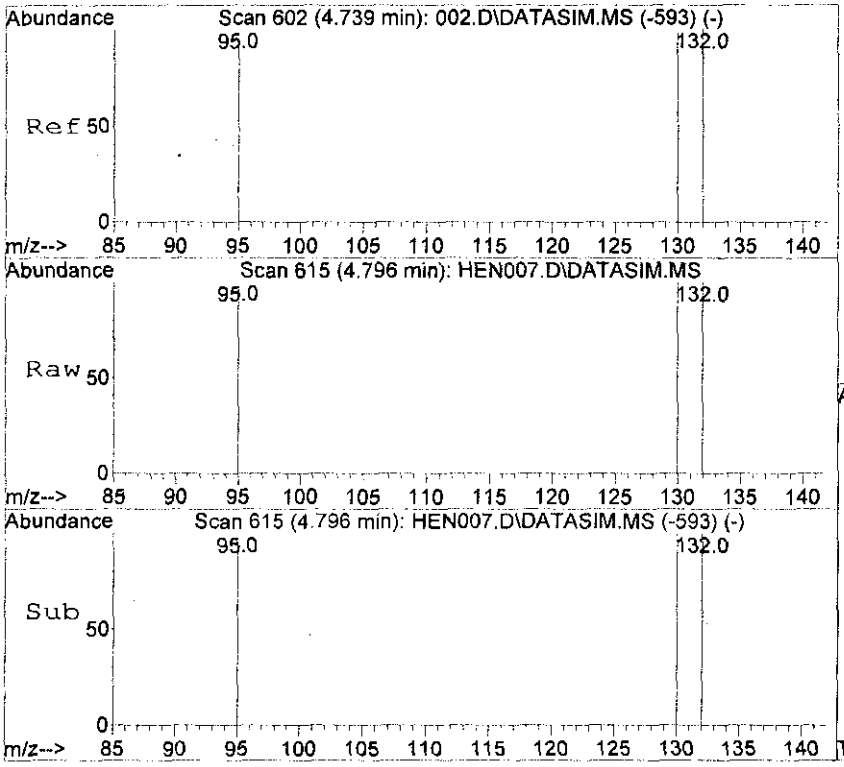


#10
Benzene
Concen: 100.74 ppbv
RT: 4.521 min Scan# 561
Delta R.T. 0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 78 Resp: 30970

Ion	Ratio	Lower	Upper
78	100		
77	23.2	18.2	27.4
50	20.1	15.9	23.9

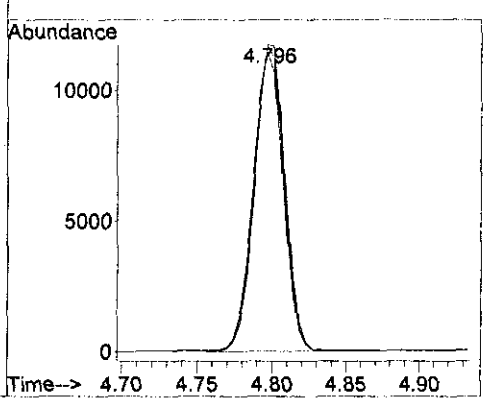


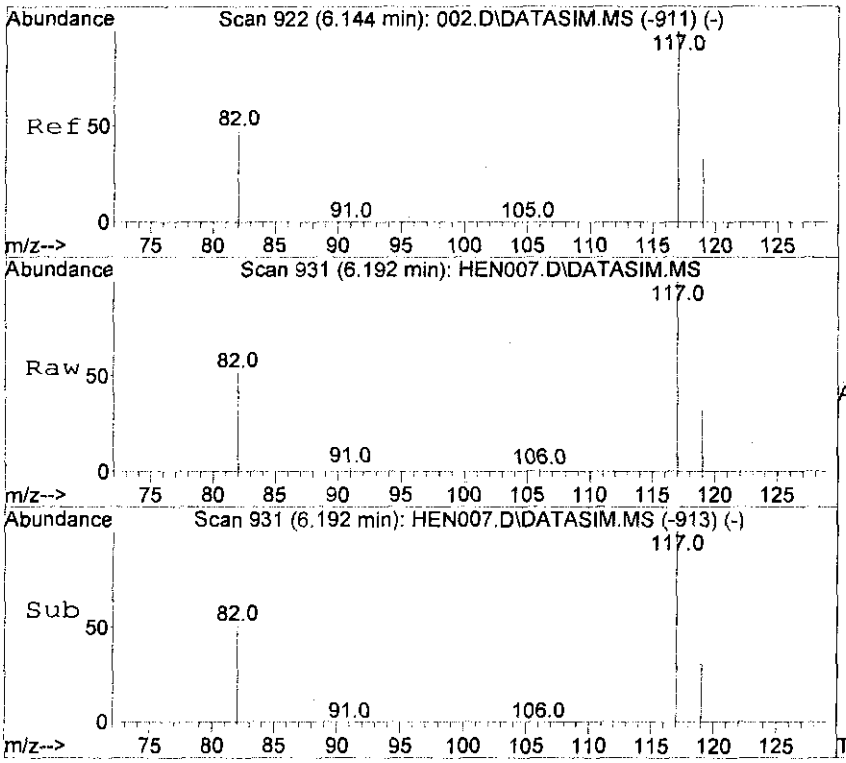


#11
Trichloroethene
Concen: 95.28 ppbv
RT: 4.796 min Scan# 615
Delta R.T. 0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion:130 Resp: 16385

Ion	Ratio	Lower	Upper
130	100		
132	100.9	80.4	120.6
95	96.4	78.6	118.0

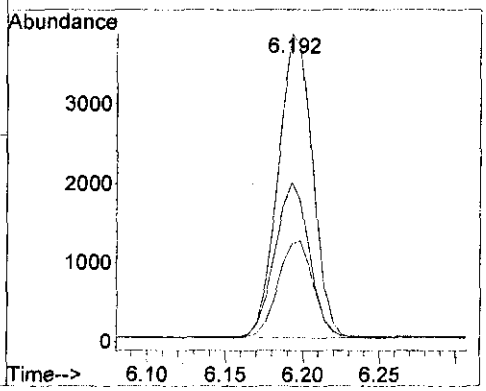


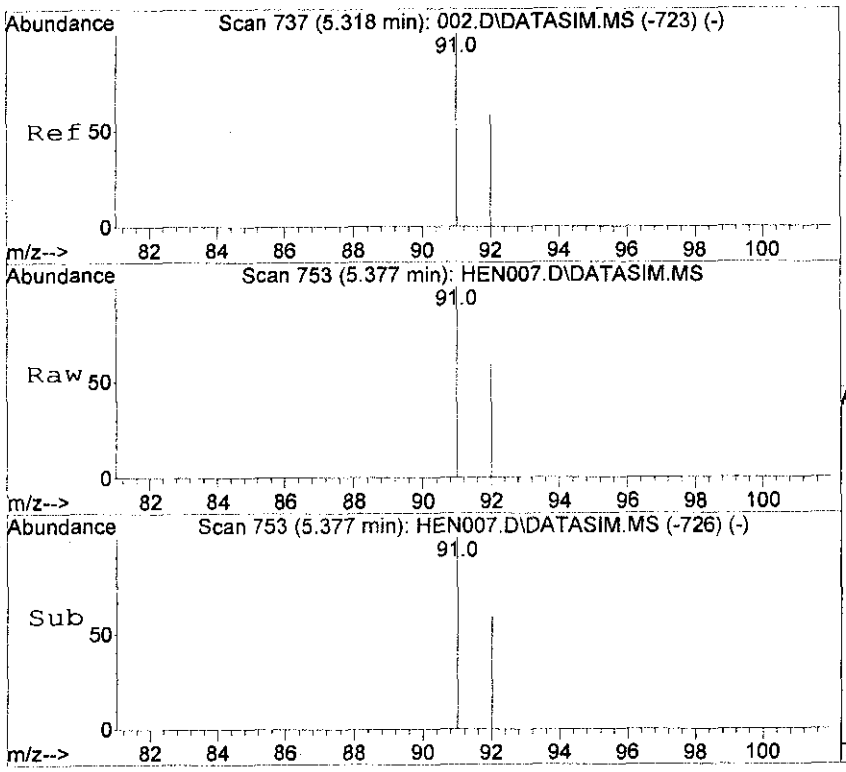


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.192 min Scan# 931
Delta R.T. -0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion:117 Resp: 5979

Ion	Ratio	Lower	Upper
117	100		
82	50.4	41.4	62.0
119	32.5	25.8	38.6

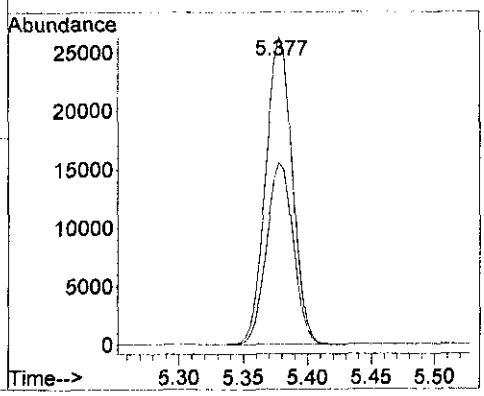


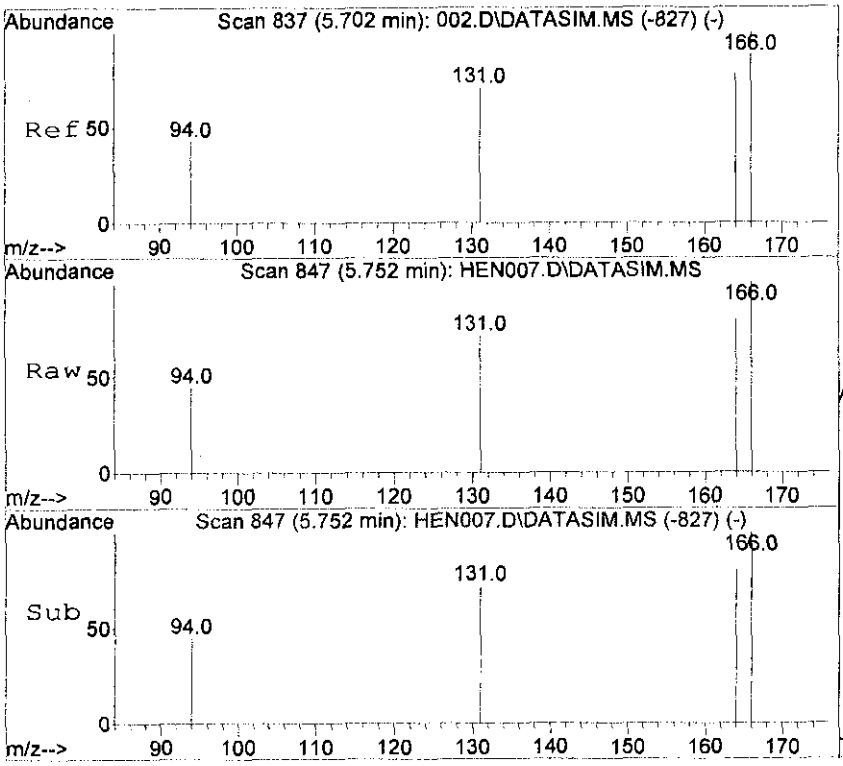


#13
Toluene
Concen: 92.35 ppbv
RT: 5.377 min Scan# 753
Delta R.T. 0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 91 Resp: 38046

Ion	Ratio	Lower	Upper
91	100		
92	59.2	47.4	71.2

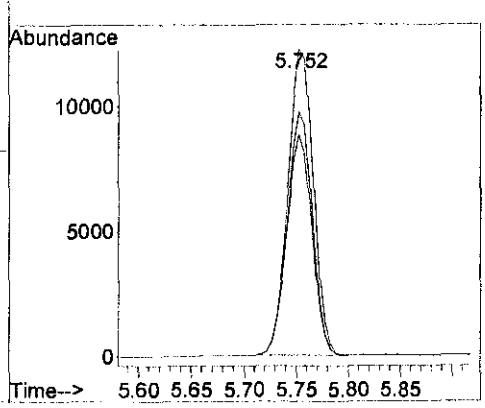


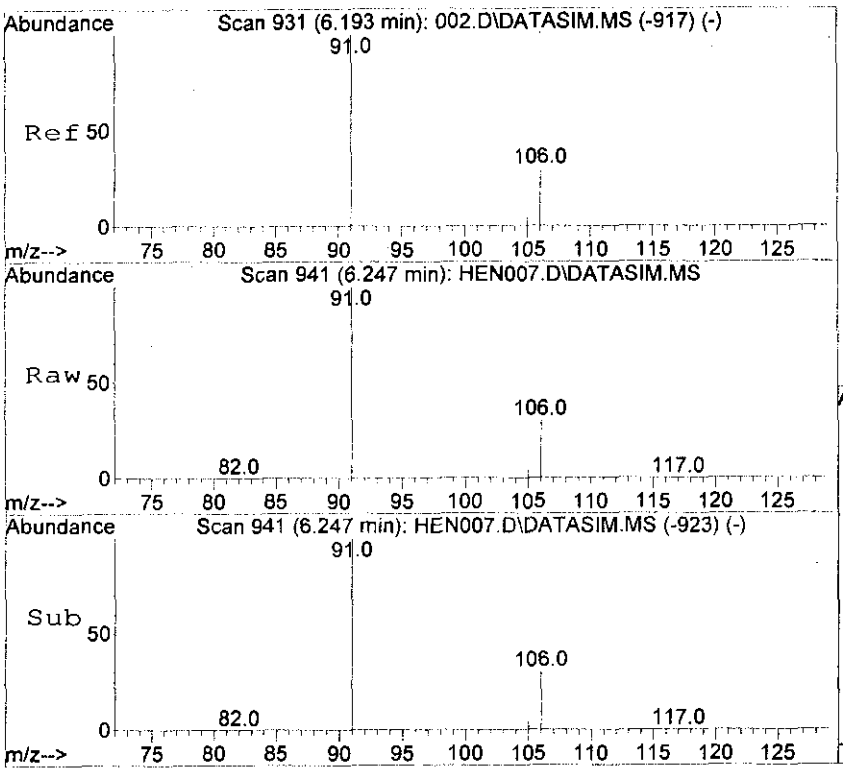


#14
Tetrachloroethene
Concen: 95.59 ppbv
RT: 5.752 min Scan# 847
Delta R.T. -0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion:166 Resp: 20809

Ion	Ratio	Lower	Upper
166	100		
164	78.3	62.5	93.7
131	71.2	57.0	85.4

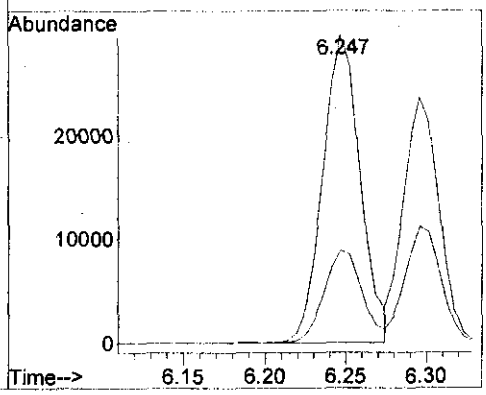


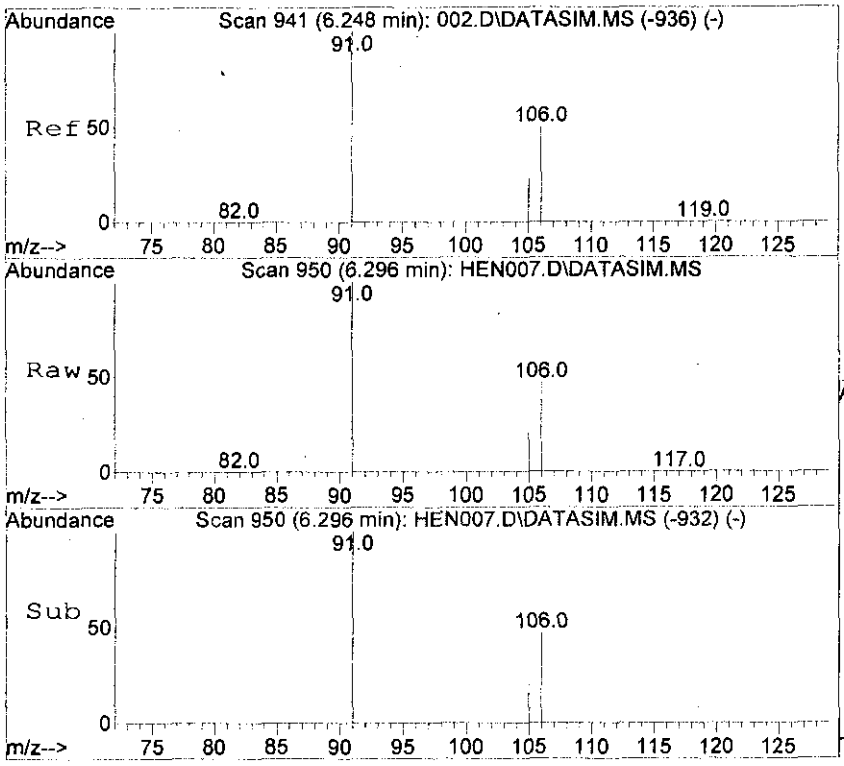


#15
Ethyl Benzene
Concen: 91.15 ppbv
RT: 6.247 min Scan# 941
Delta R.T. -0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 91 Resp: 48150

Ion	Ratio	Lower	Upper
91	100		
106	29.9	23.9	35.9

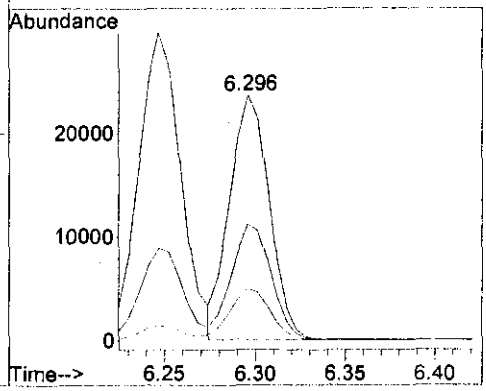


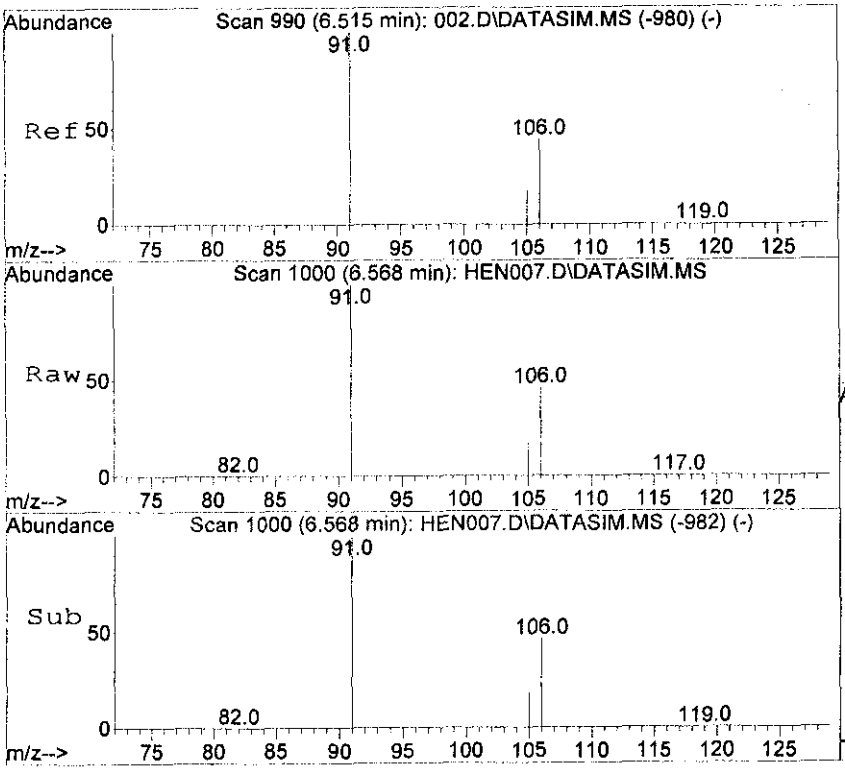


#16
m,p-Xylene
Concen: 87.60 ppbv
RT: 6.296 min Scan# 950
Delta R.T. -0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 91 Resp: 35862

Ion	Ratio	Lower	Upper
91	100		
106	47.1	37.3	55.9
105	21.3	16.7	25.1

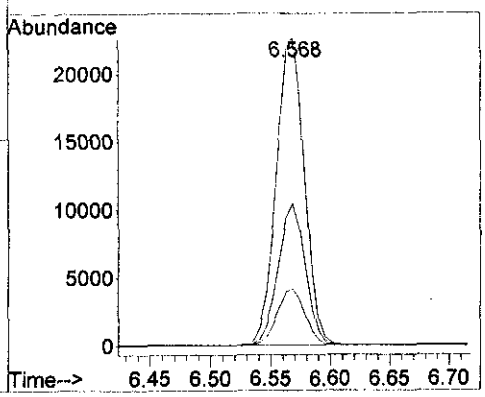




#17
o-Xylene
Concen: 86.13 ppbv
RT: 6.568 min Scan# 1000
Delta R.T. -0.000 min
Lab File: HEN007.D
Acq: 16 Mar 2012 14:52

Tgt Ion: 91 Resp: 36890

Ion	Ratio	Lower	Upper
91	100		
106	44.7	35.8	53.8
105	18.1	14.2	21.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN008.D
Acq On : 16 Mar 2012 15:04
Operator : SJT
Sample : STD20120316-5 \ 5ppbv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 15:29:26 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 15:27:43 2012
Response via : Initial Calibration

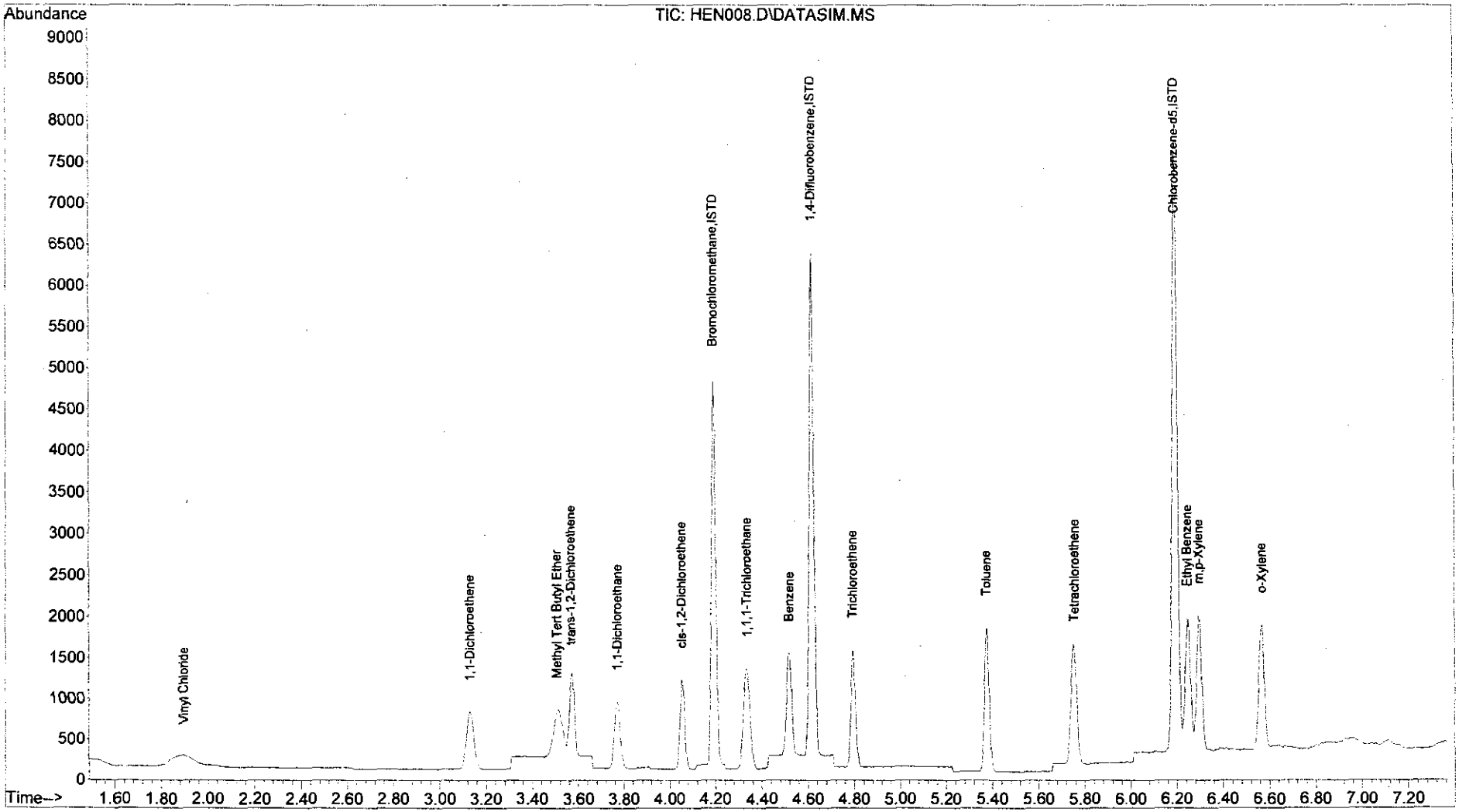
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	4.192	49	2500	10.00	ppbv		0.00
9) 1,4-Difluorobenzene	4.619	114	5900	10.00	ppbv		0.00
12) Chlorobenzene-d5	6.192	117	6184	10.00	ppbv		0.00
System Monitoring Compounds							
Target Compounds							Qvalue
2) Vinyl Chloride	1.896	62	440m	3.96	ppbv		
3) 1,1-Dichloroethene	3.132	61	861	4.29	ppbv		99
4) Methyl Tert Butyl Ether	3.510	73	1191	3.97	ppbv	#	98
5) trans-1,2-Dichloroethene	3.570	61	803	4.49	ppbv		99
6) 1,1-Dichloroethane	3.772	63	905	4.18	ppbv		98
7) cis-1,2-Dichloroethene	4.054	61	728m	4.19	ppbv		
8) 1,1,1-Trichloroethane	4.336	97	1130	3.93	ppbv		98
10) Benzene	4.521	78	1325	4.17	ppbv	#	93
11) Trichloroethene	4.796	130	666m	3.82	ppbv		
13) Toluene	5.377	91	1610	3.85	ppbv		100
14) Tetrachloroethene	5.757	166	840	3.78	ppbv		98
15) Ethyl Benzene	6.247	91	1948	3.65	ppbv		98
16) m,p-Xylene	6.296	91	1513	3.68	ppbv		97
17) o-Xylene	6.568	91	1517m	3.52	ppbv		

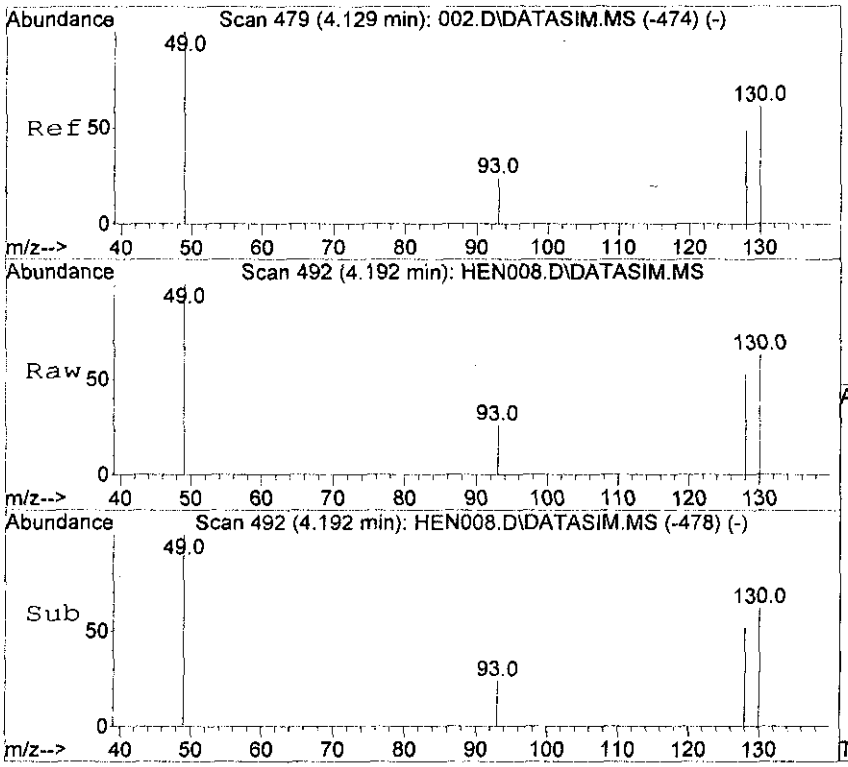
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN008.D
Acq On : 16 Mar 2012 15:04
Operator : SJT
Sample : STD20120316-5 \ 5ppbv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 15:29:26 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 15:27:43 2012
Response via : Initial Calibration

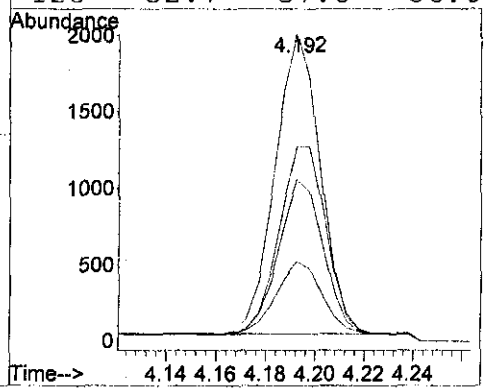


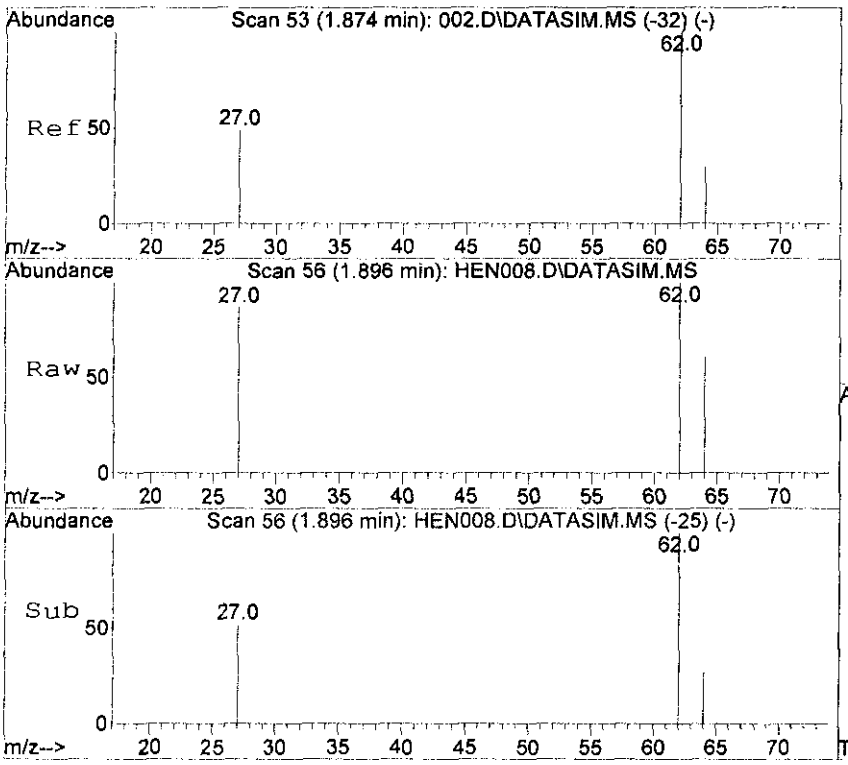


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. -0.001 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 49 Resp: 2500

Ion	Ratio	Lower	Upper
49	100		
130	63.1	46.5	69.7
93	26.1	19.0	28.6
128	52.7	37.8	56.6

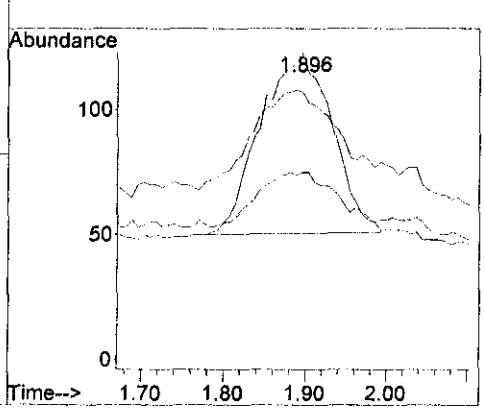


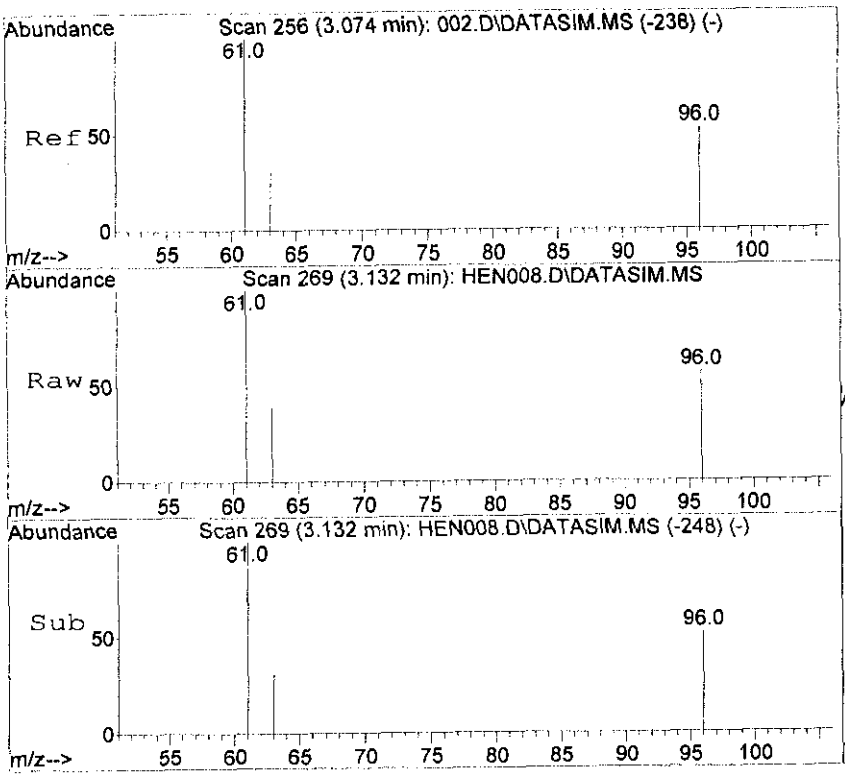


#2
Vinyl Chloride
Concen: 3.96 ppbv m
RT: 1.896 min Scan# 56
Delta R.T. -0.022 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 62 Resp: 440

Ion	Ratio	Lower	Upper
62	100		
64	39.1	23.7	35.5#
27	70.5	39.8	59.8#

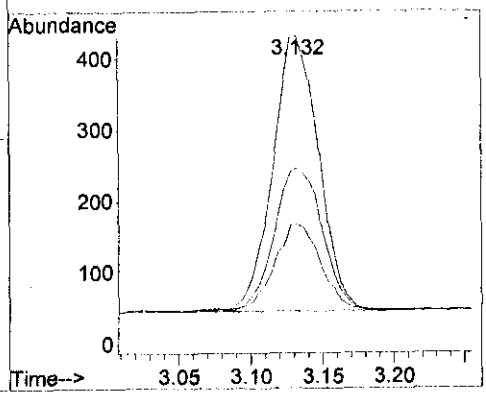


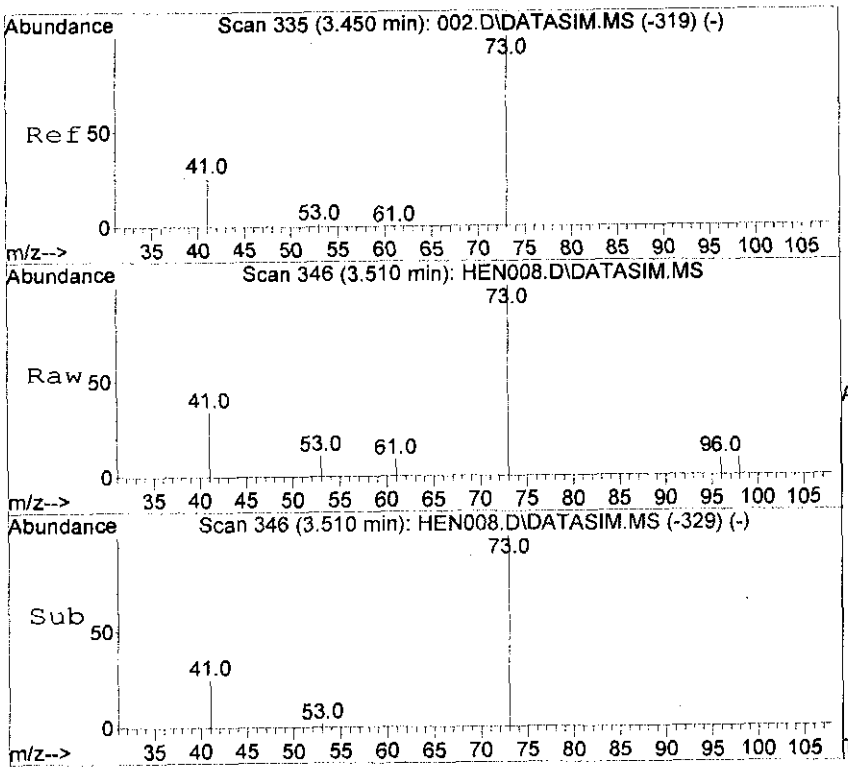


#3
1,1-Dichloroethene
Concen: 4.29 ppbv
RT: 3.132 min Scan# 269
Delta R.T. -0.009 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 61 Resp: 861

Ion	Ratio	Lower	Upper
61	100		
96	54.1	43.8	65.6
63	32.4	25.1	37.7

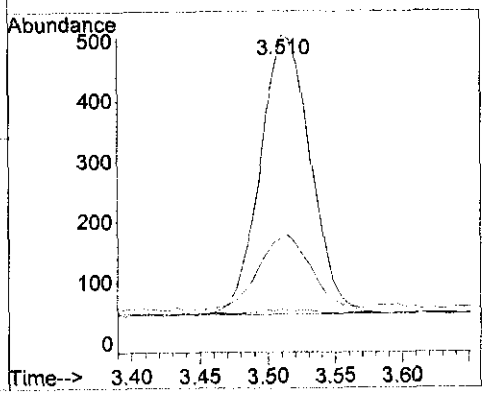


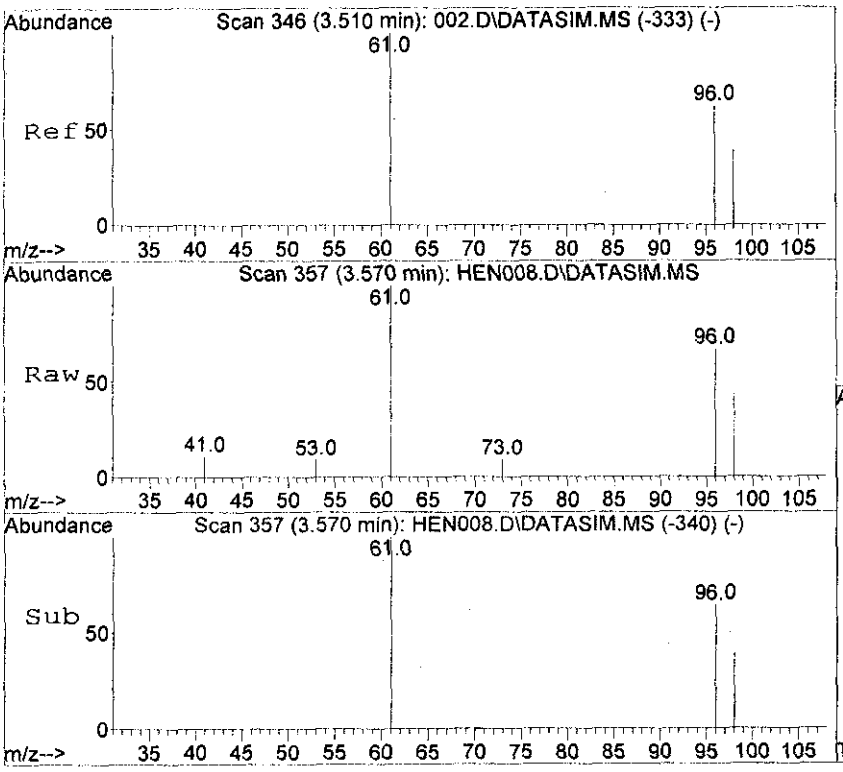


#4
Methyl Tert Butyl Ether
Concen: 3.97 ppbv
RT: 3.510 min Scan# 346
Delta R.T. -0.006 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 73 Resp: 1191

Ion	Ratio	Lower	Upper
73	100		
53	0.2	1.1	1.7#
41	28.1	21.8	32.6

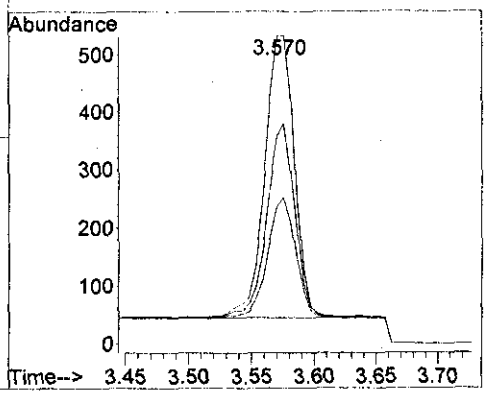


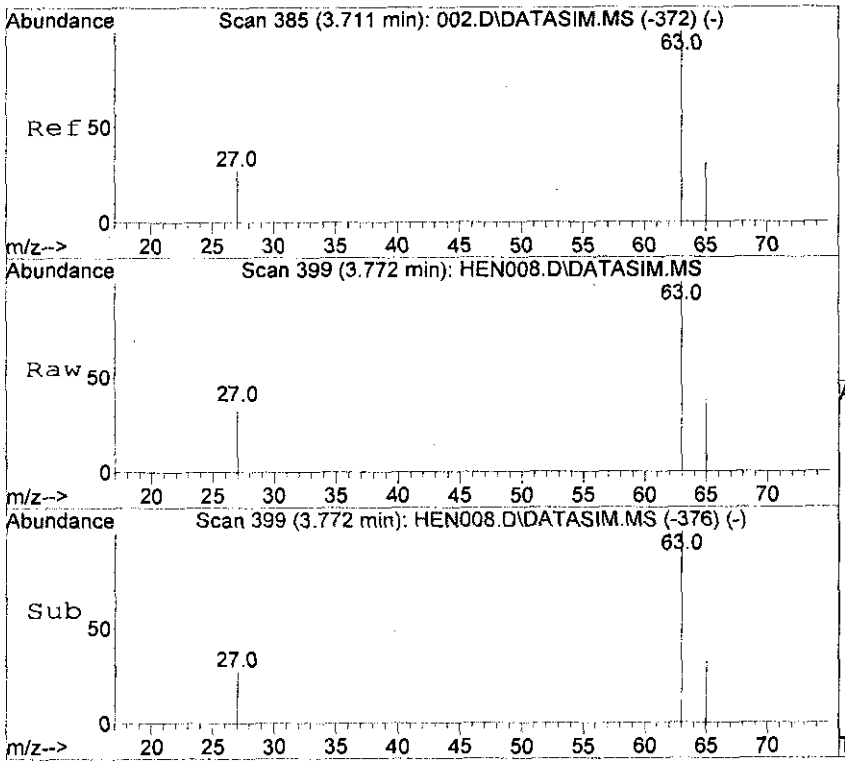


#5
trans-1,2-Dichloroethene
Concen: 4.49 ppbv
RT: 3.570 min Scan# 357
Delta R.T. -0.006 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 61 Resp: 803

Ion	Ratio	Lower	Upper
61	100		
96	65.1	51.3	76.9
98	40.6	32.7	49.1

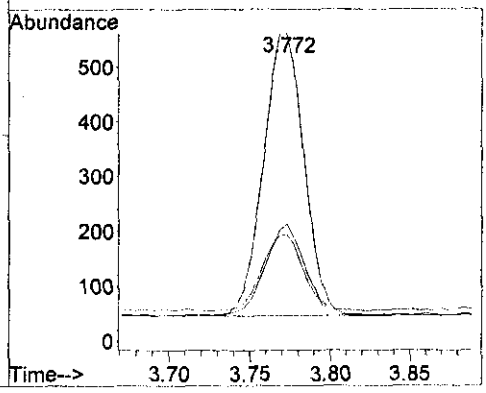


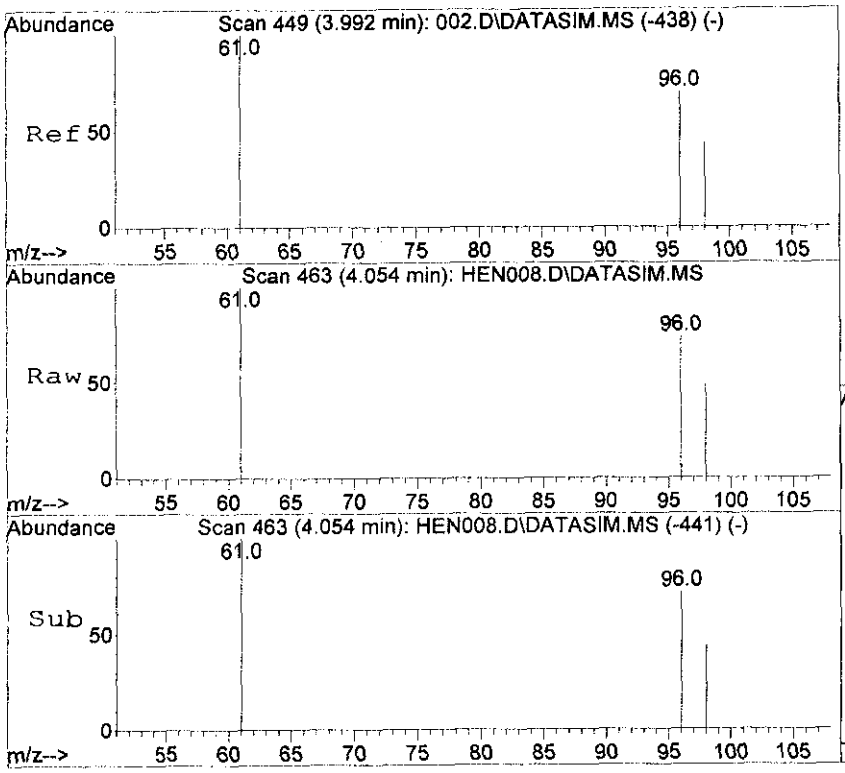


#6
1,1-Dichloroethane
Concen: 4.18 ppbv
RT: 3.772 min Scan# 399
Delta R.T. -0.000 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 63 Resp: 905

Ion	Ratio	Lower	Upper
63	100		
65	32.0	24.7	37.1
27	28.1	22.0	33.0

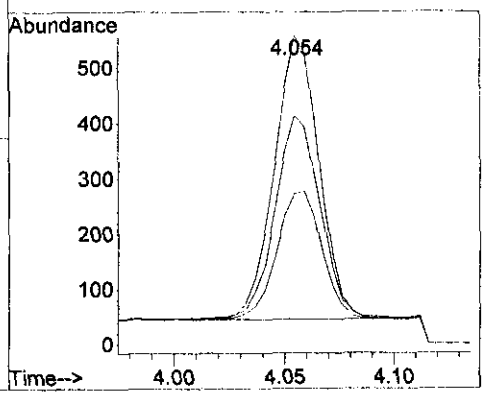


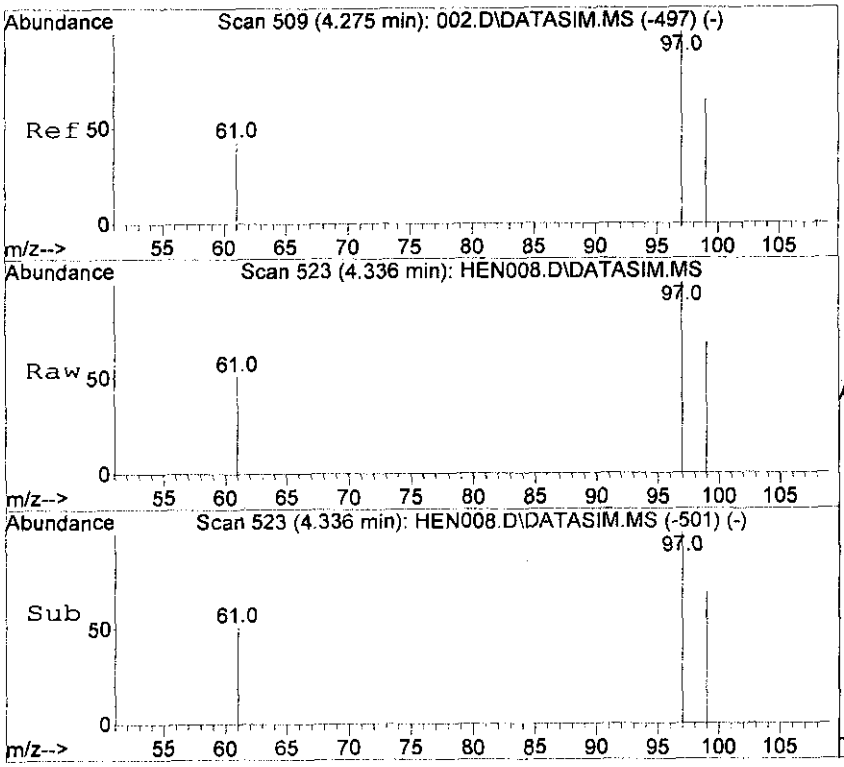


#7
cis-1,2-Dichloroethene
Concen: 4.19 ppbv m
RT: 4.054 min Scan# 463
Delta R.T. -0.004 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 61 Resp: 728

Ion	Ratio	Lower	Upper
61	100		
96	106.7	56.2	84.4#
98	78.8	36.0	54.0#

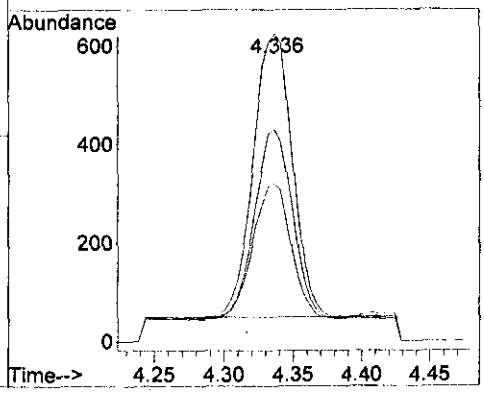


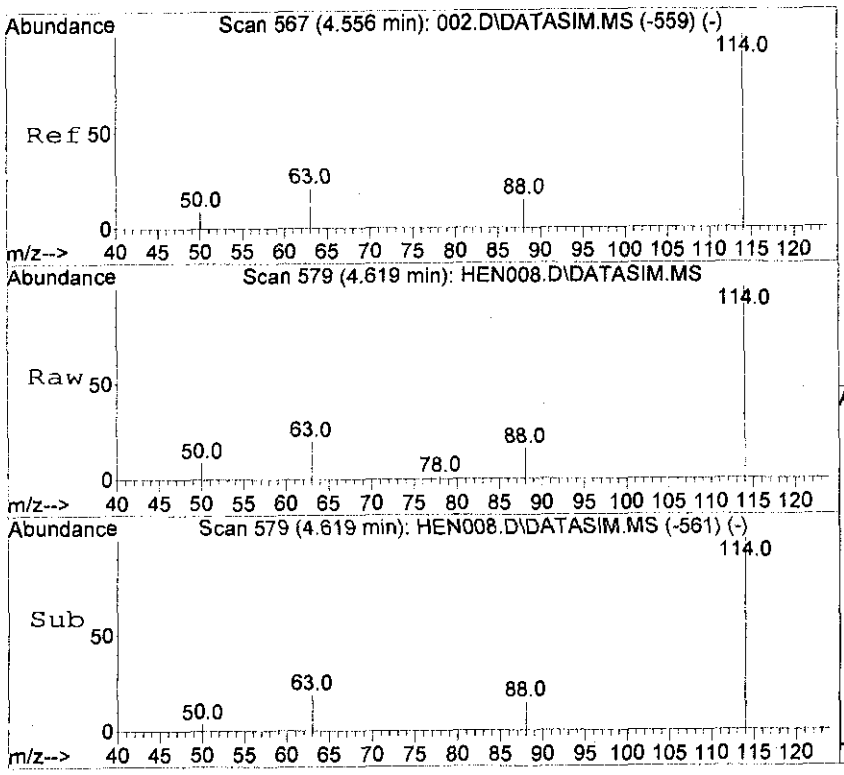


#8
1,1,1-Trichloroethane
Concen: 3.93 ppbv
RT: 4.336 min Scan# 523
Delta R.T. -0.000 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 97 Resp: 1130

Ion	Ratio	Lower	Upper
97	100		
99	64.6	51.5	77.3
61	47.1	35.8	53.8

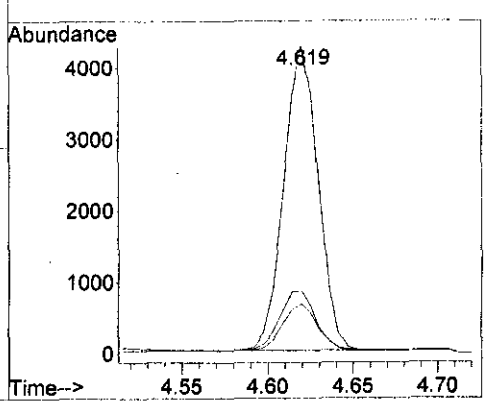


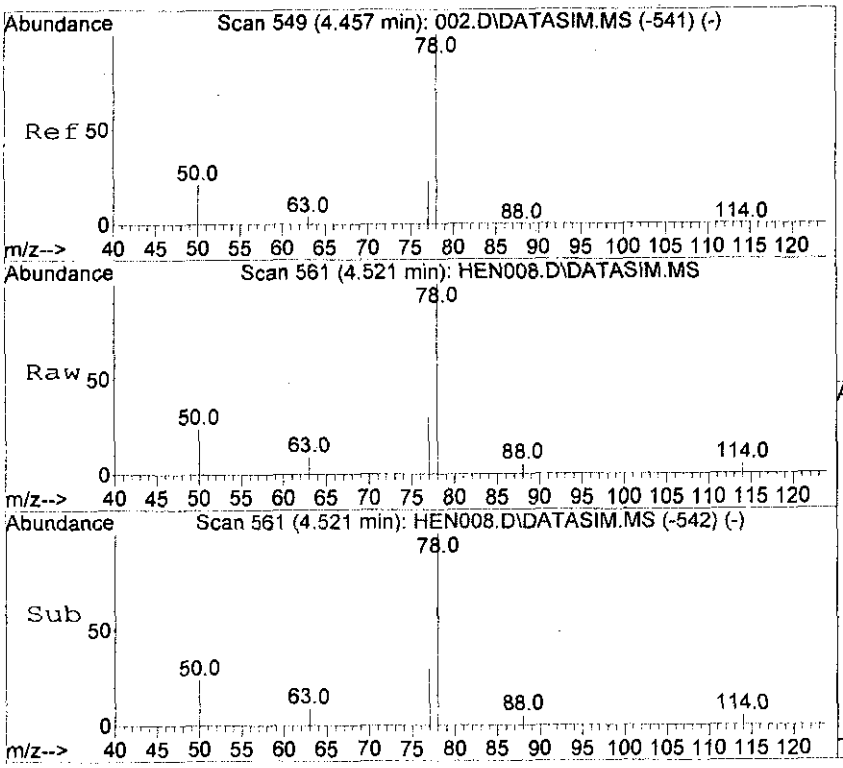


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. -0.000 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion:114 Resp: 5900

Ion	Ratio	Lower	Upper
114	100		
63	20.2	16.7	25.1
88	15.4	12.2	18.2

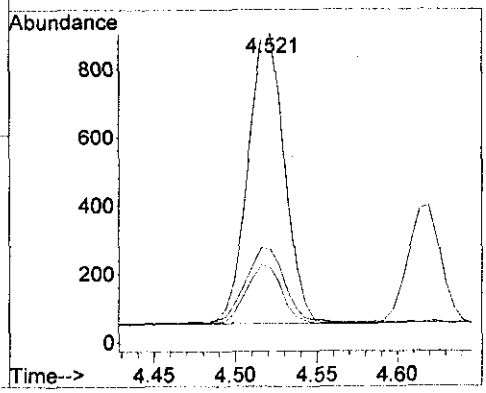


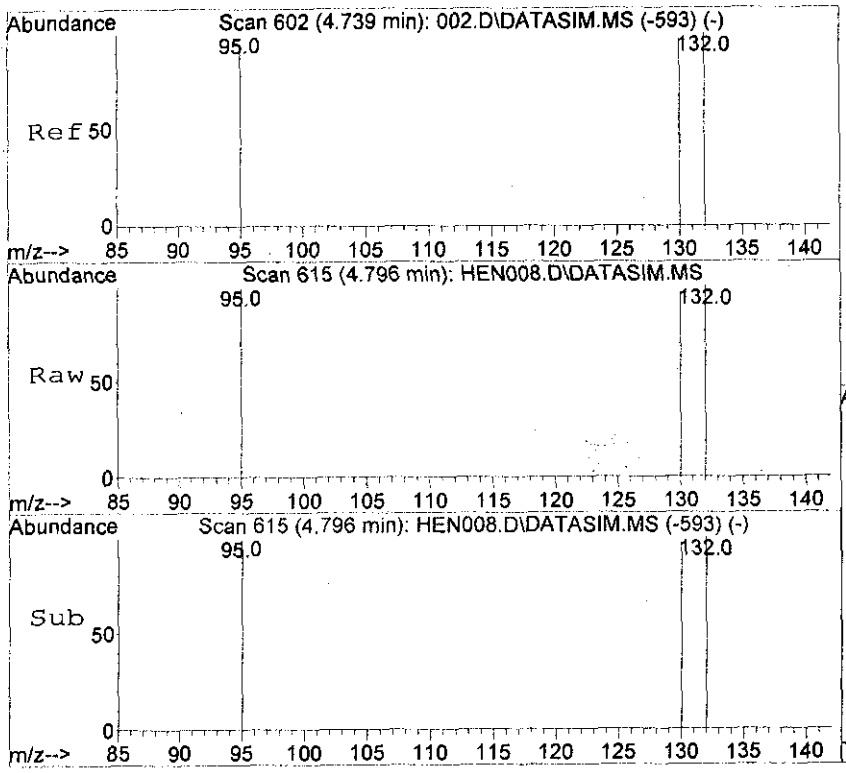


#10
Benzene
Concen: 4.17 ppbv
RT: 4.521 min Scan# 561
Delta R.T. -0.000 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 78 Resp: 1325

Ion	Ratio	Lower	Upper
78	100		
77	28.9	18.2	27.4#
50	20.6	15.9	23.9

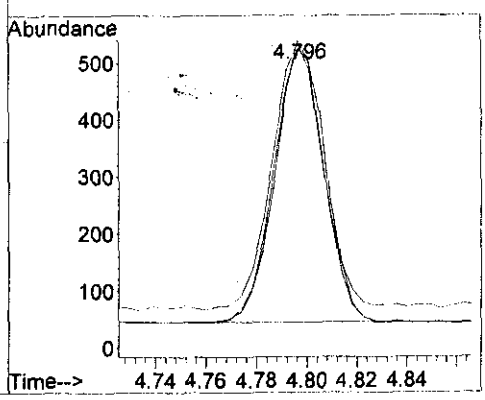


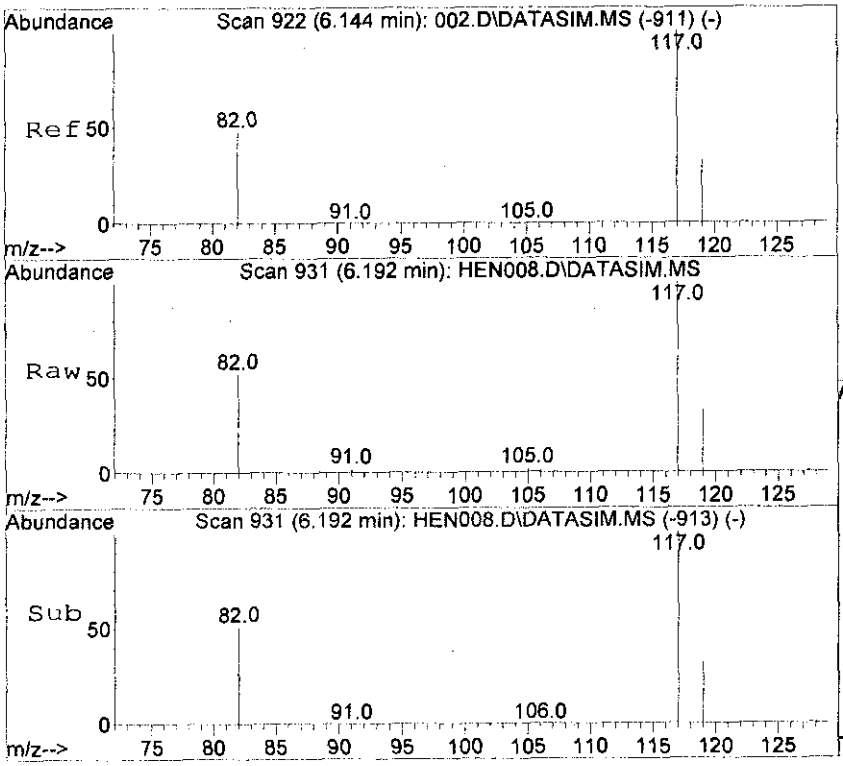


#11
Trichloroethene
Concen: 3.82 ppbv m
RT: 4.796 min Scan# 615
Delta R.T. -0.000 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion:130 Resp: 666

Ion	Ratio	Lower	Upper
130	100		
132	118.9	80.4	120.6
95	123.9	78.6	118.0#

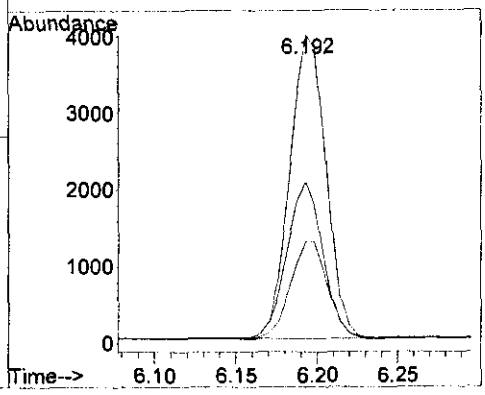


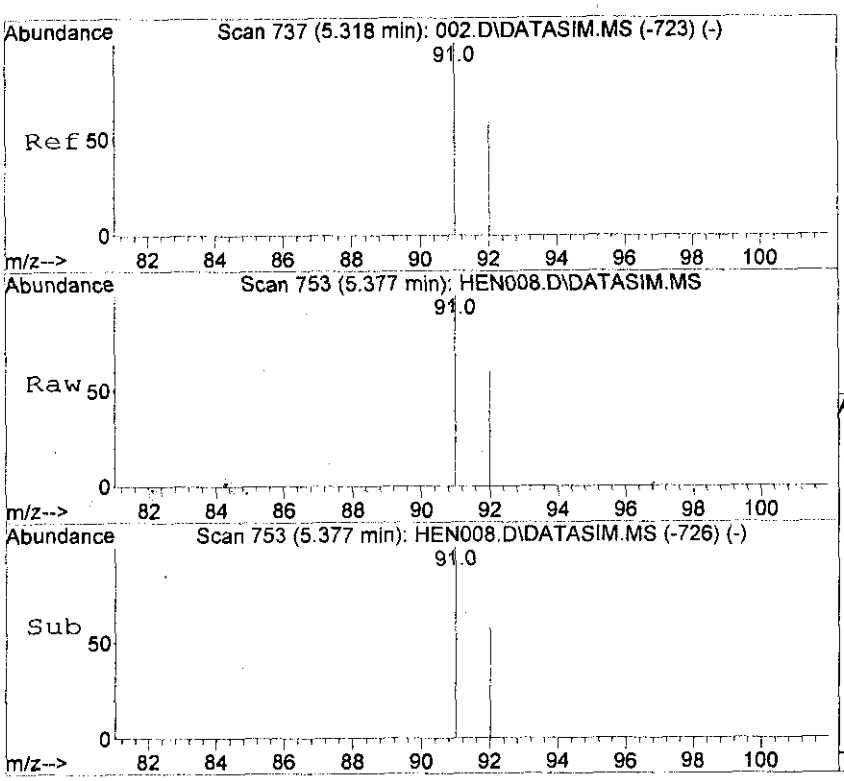


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.192 min Scan# 931
Delta R.T. 0.000 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion:117 Resp: 6184

Ion	Ratio	Lower	Upper
117	100		
82	50.9	41.4	62.0
119	32.7	25.8	38.6

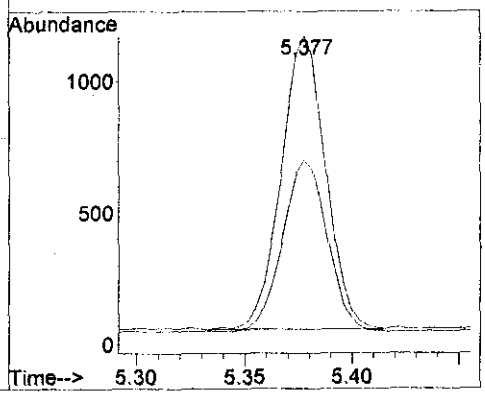


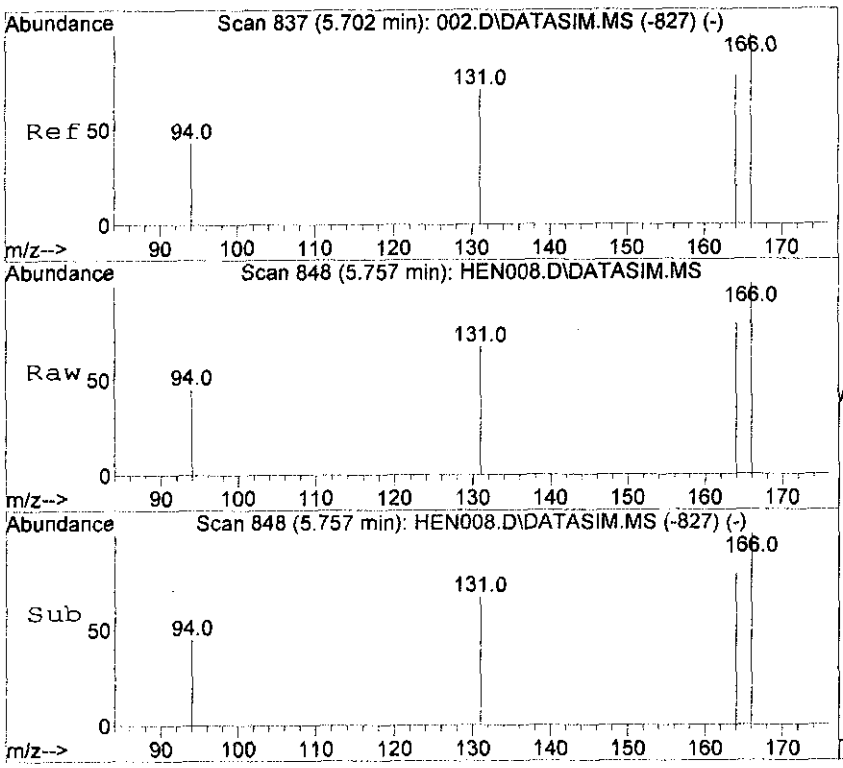


#13
Toluene
Concen: 3.85 ppbv
RT: 5.377 min Scan# 753
Delta R.T. -0.000 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 91 Resp: 1610

Ion	Ratio	Lower	Upper
91	100		
92	59.0	47.4	71.2

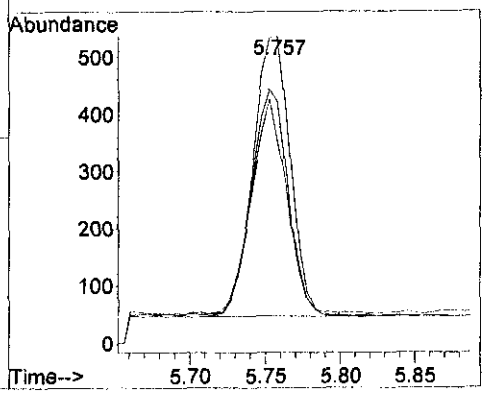


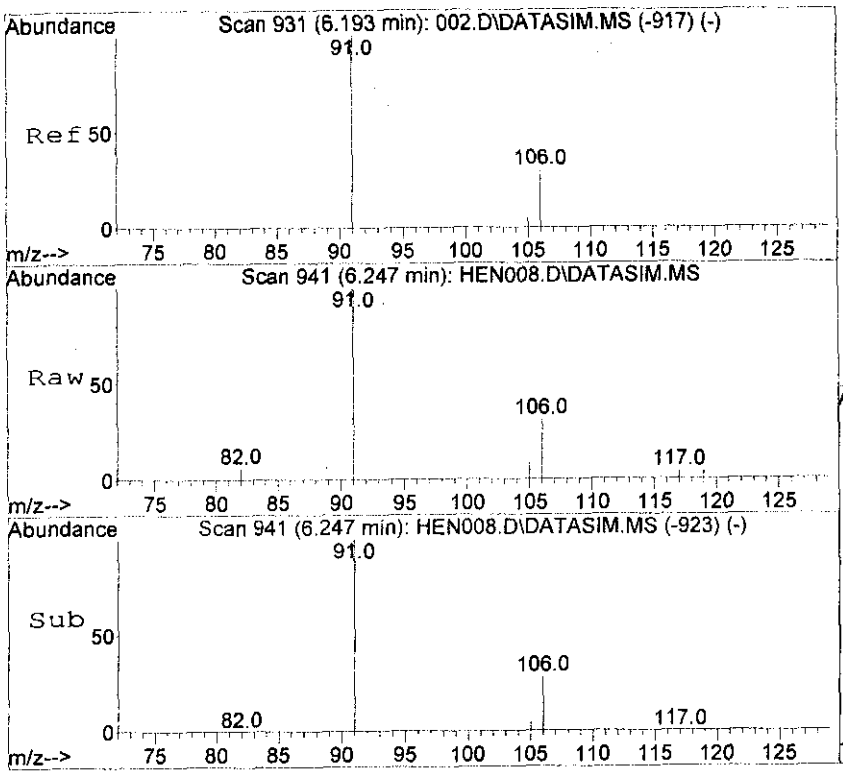


#14
Tetrachloroethene
Concen: 3.78 ppbv
RT: 5.757 min Scan# 848
Delta R.T. 0.005 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion:166 Resp: 840

Ion	Ratio	Lower	Upper
166	100		
164	79.6	62.5	93.7
131	73.3	57.0	85.4

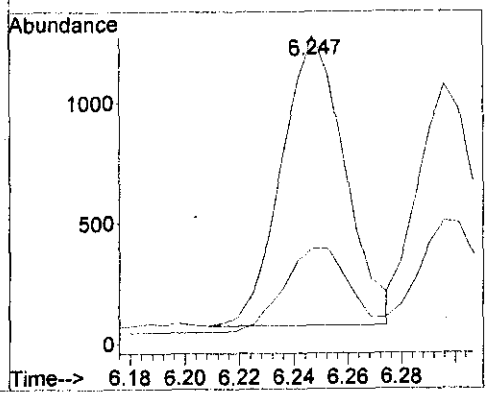


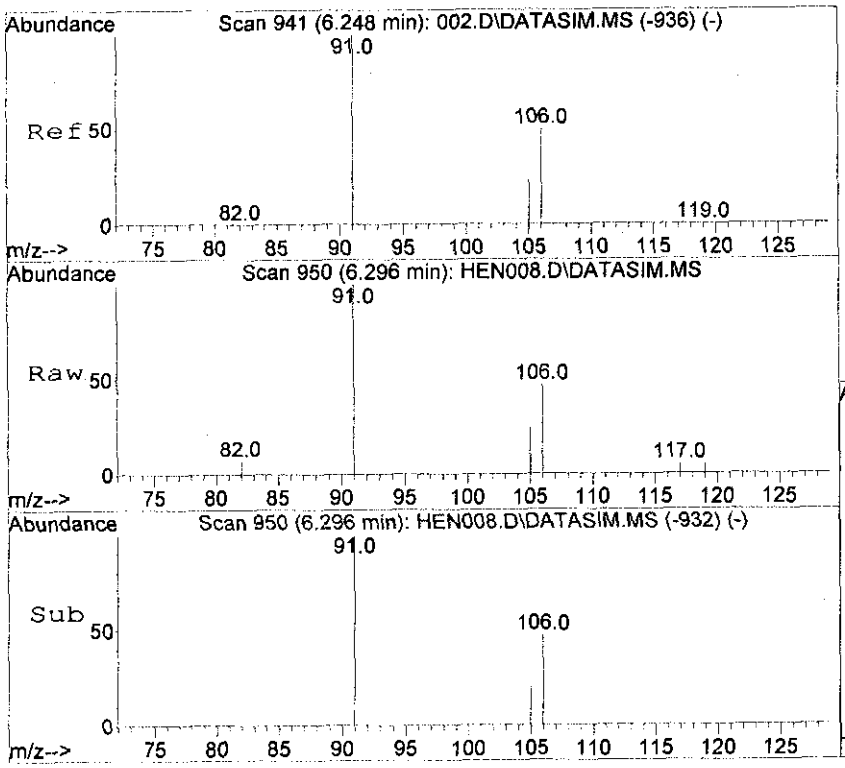


#15
Ethyl Benzene
Concen: 3.65 ppbv
RT: 6.247 min Scan# 941
Delta R.T. 0.000 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 91 Resp: 1948

Ion	Ratio	Lower	Upper
91	100		
106	30.8	23.9	35.9

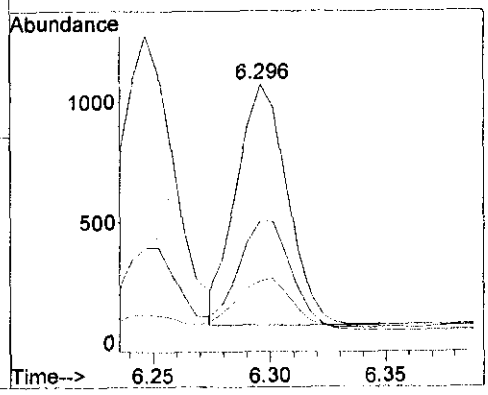


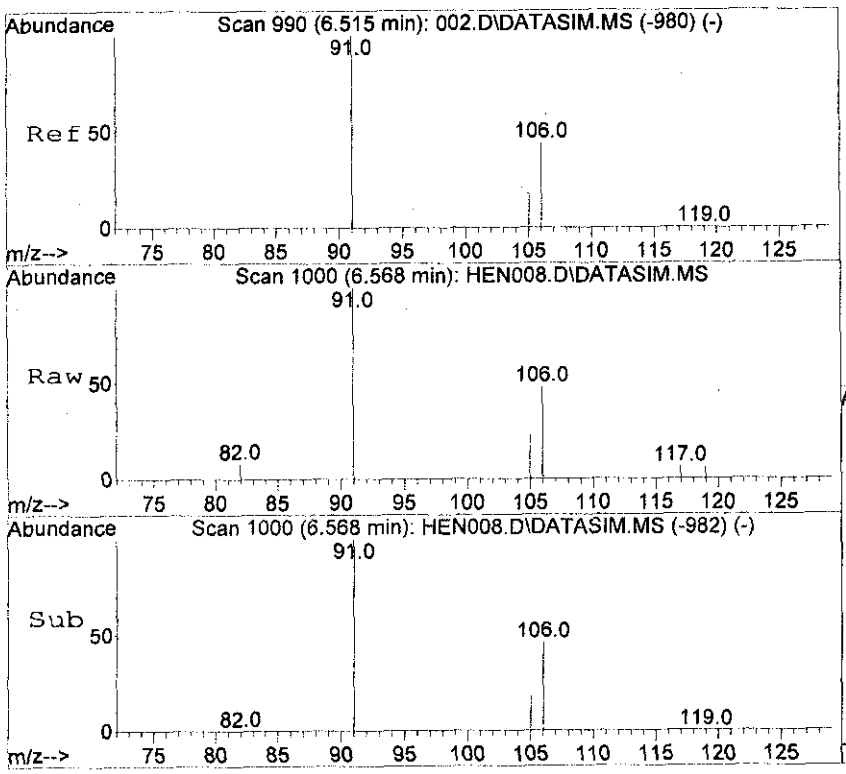


#16
m,p-Xylene
Concen: 3.68 ppbv
RT: 6.296 min Scan# 950
Delta R.T. 0.000 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 91 Resp: 1513

Ion	Ratio	Lower	Upper
91	100		
106	47.3	37.3	55.9
105	23.7	16.7	25.1

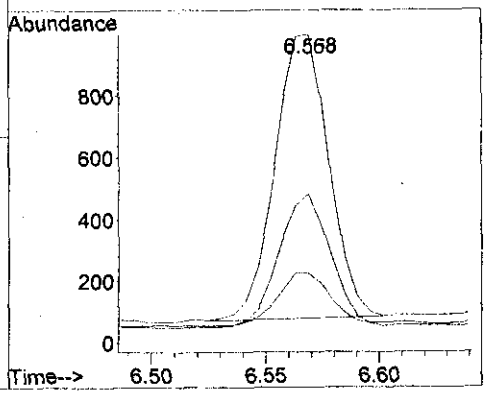




#17
o-Xylene
Concen: 3.52 ppbv m
RT: 6.568 min Scan# 1000
Delta R.T. 0.000 min
Lab File: HEN008.D
Acq: 16 Mar 2012 15:04

Tgt Ion: 91 Resp: 1517

Ion	Ratio	Lower	Upper
91	100		
106	45.9	35.8	53.8
105	20.0	14.2	21.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN009.D
Acq On : 16 Mar 2012 15:15
Operator : SJT
Sample : STD20120316-6 \ 0.5ppbv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 15:37:06 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 14:31:35 2012
Response via : Initial Calibration

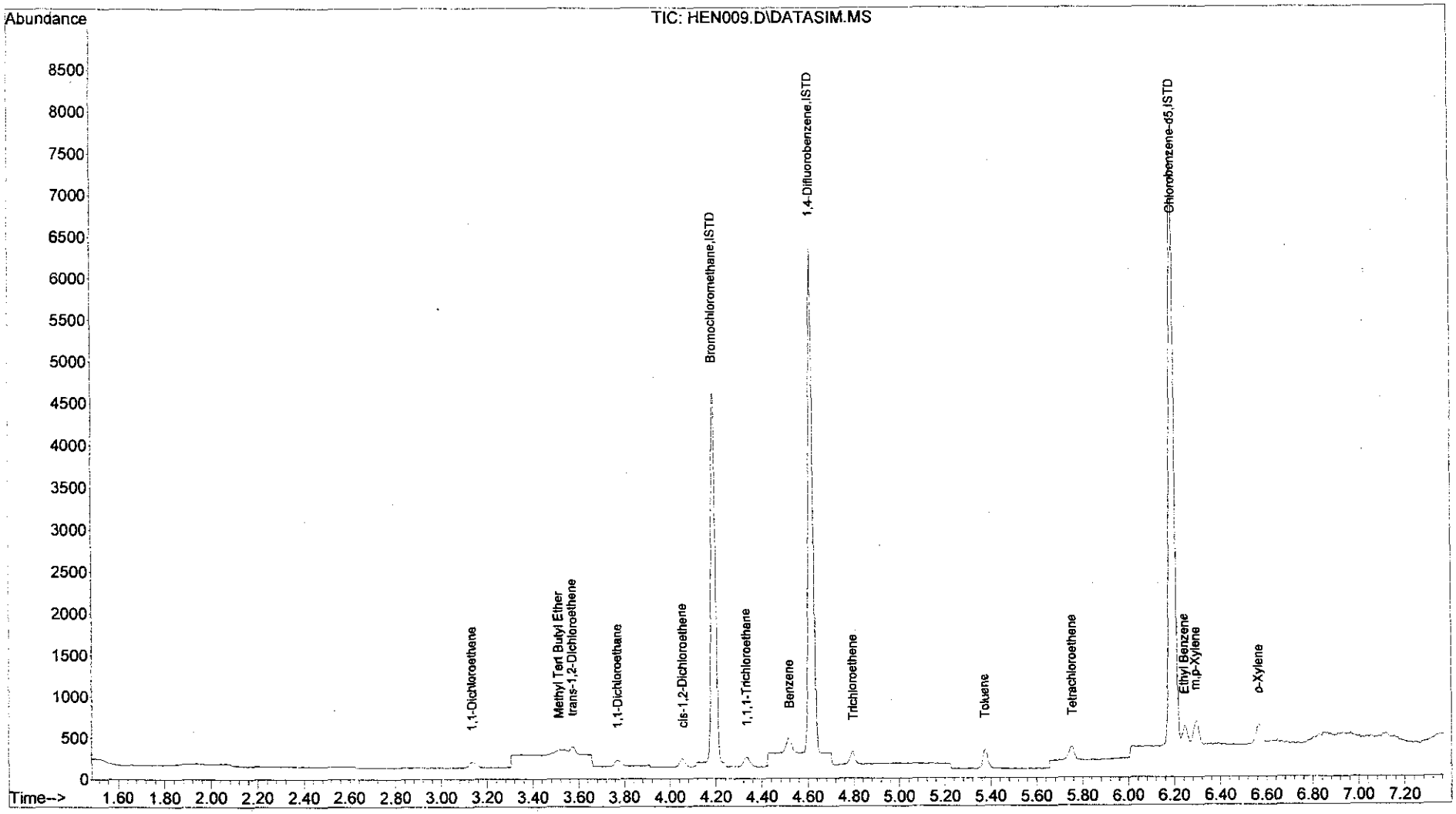
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.192	49	2452	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5806	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.196	117	6139	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
3) 1,1-Dichloroethene	3.136	61	77m	0.39 ppbv	
4) Methyl Tert Butyl Ether	3.515	73	122m	0.40 ppbv	
5) trans-1,2-Dichloroethene	3.575	61	80m	0.45 ppbv	
6) 1,1-Dichloroethane	3.772	63	83m	0.38 ppbv	
7) cis-1,2-Dichloroethene	4.059	61	81m	0.47 ppbv	
8) 1,1,1-Trichloroethane	4.336	97	106m	0.36 ppbv	
10) Benzene	4.521	78	154m	0.49 ppbv	
11) Trichloroethene	4.799	130	71m	0.41 ppbv	
13) Toluene	5.376	91	209m	0.49 ppbv	
14) Tetrachloroethene	5.756	166	90m	0.40 ppbv	
15) Ethyl Benzene	6.245	91	279m	0.51 ppbv	
16) m,p-Xylene	6.295	91	252m	0.60 ppbv	
17) o-Xylene	6.567	91	236m	0.54 ppbv	

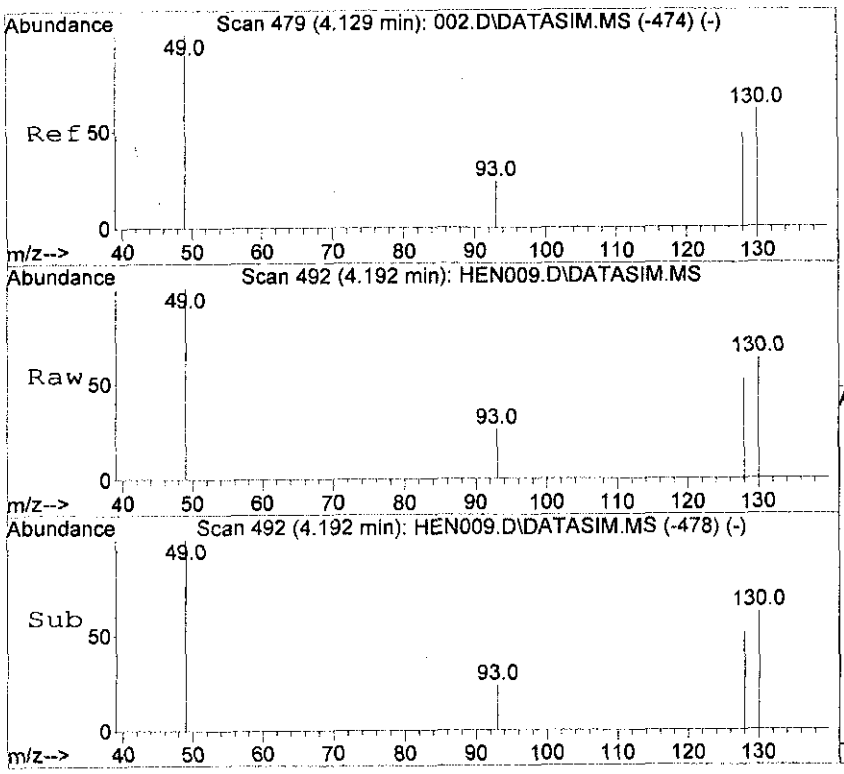
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN009.D
Acq On : 16 Mar 2012 15:15
Operator : SJT
Sample : STD20120316-6 \ 0.5ppbv ICAL STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 15:37:06 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 14:31:35 2012
QLast Update : Fri Mar 16 14:31:35 2012
Response via : Initial Calibration

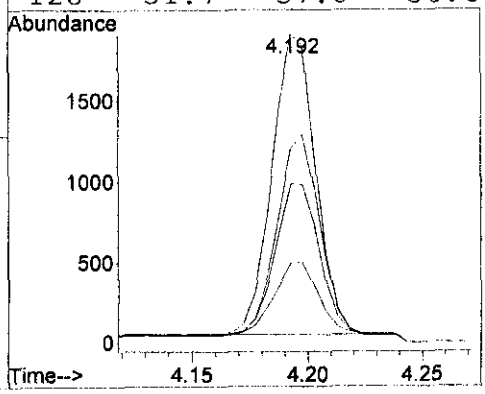


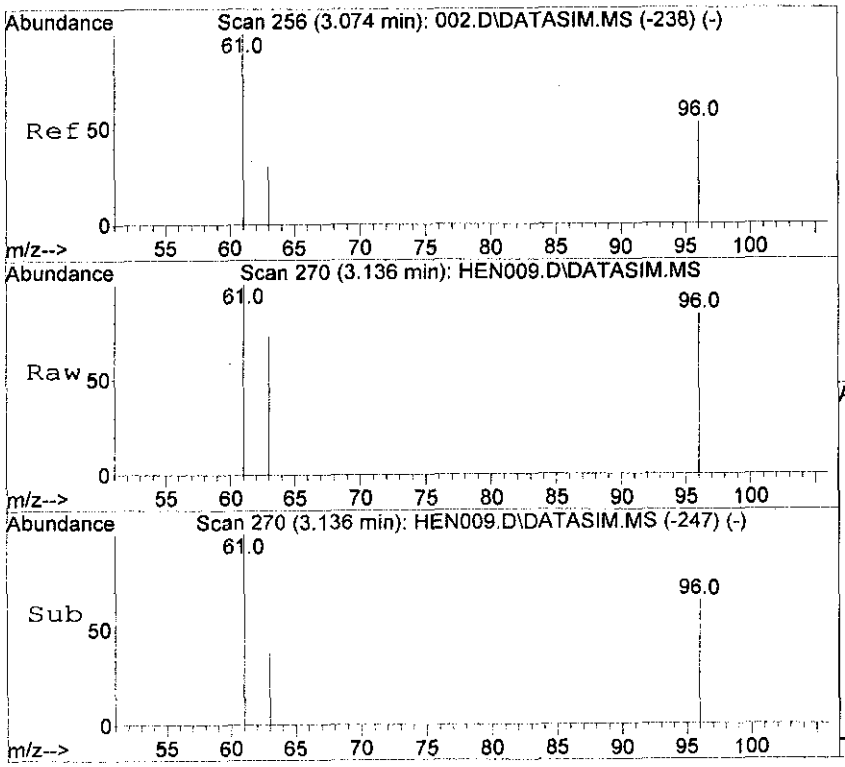


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 49 Resp: 2452

Ion	Ratio	Lower	Upper
49	100		
130	62.9	46.5	69.7
93	25.8	19.0	28.6
128	51.7	37.8	56.6

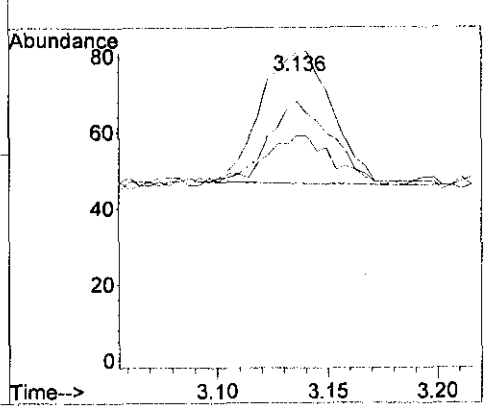


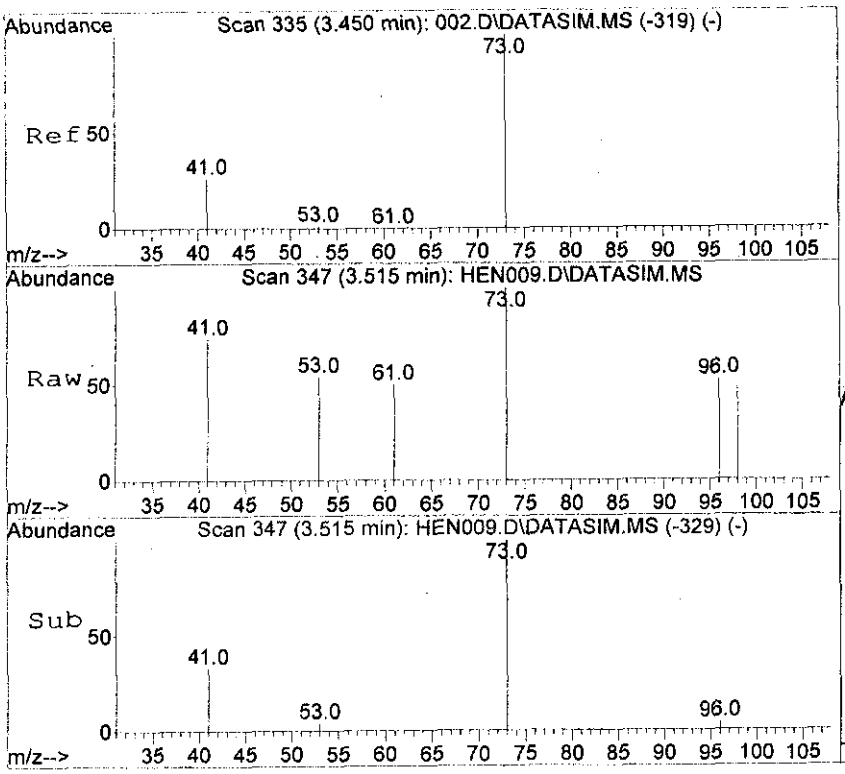


#3
1,1-Dichloroethene
Concen: 0.39 ppbv m
RT: 3.136 min Scan# 270
Delta R.T. 0.000 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 61 Resp: 77

Ion	Ratio	Lower	Upper
61	100		
96	61.0	43.8	65.6
63	46.8	25.1	37.7#

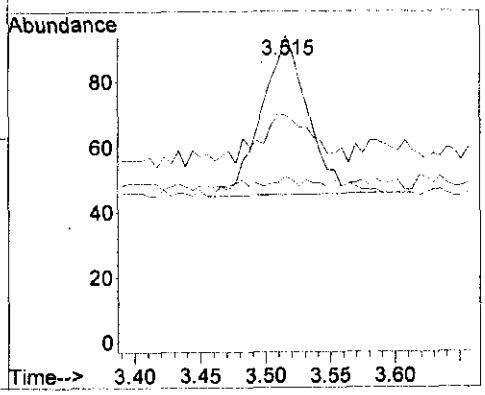


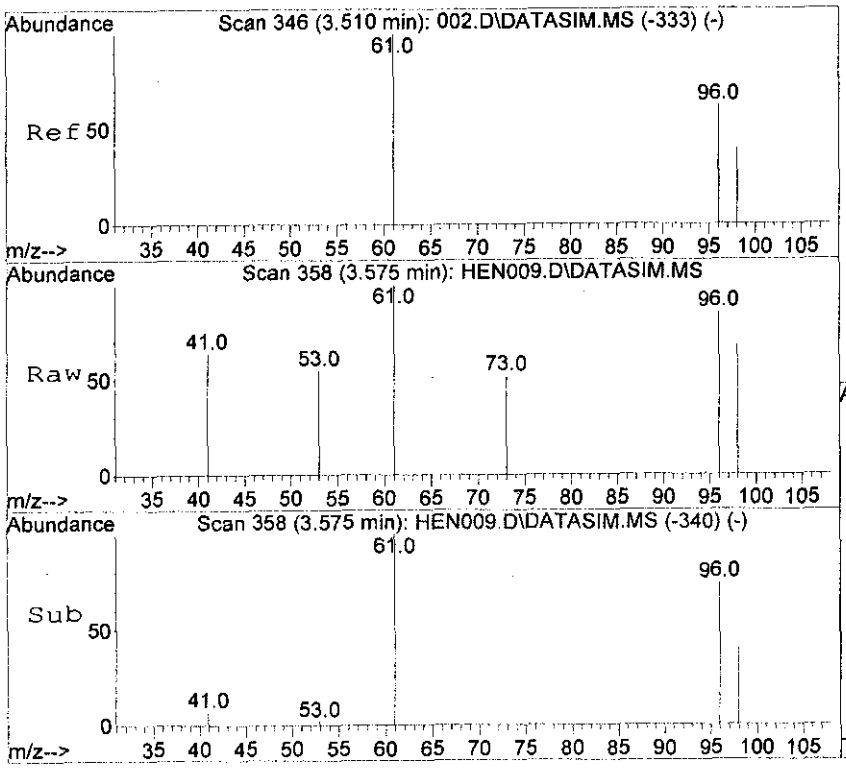


#4
Methyl Tert Butyl Ether
Concen: 0.40 ppbv m
RT: 3.515 min Scan# 347
Delta R.T. 0.000 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 73 Resp: 122

Ion	Ratio	Lower	Upper
73	100		
53	2.5	1.1	1.7#
41	36.1	21.8	32.6#

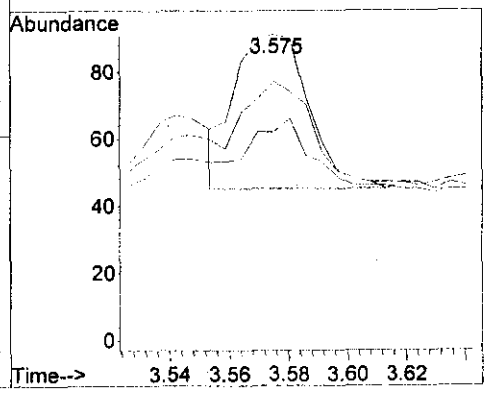


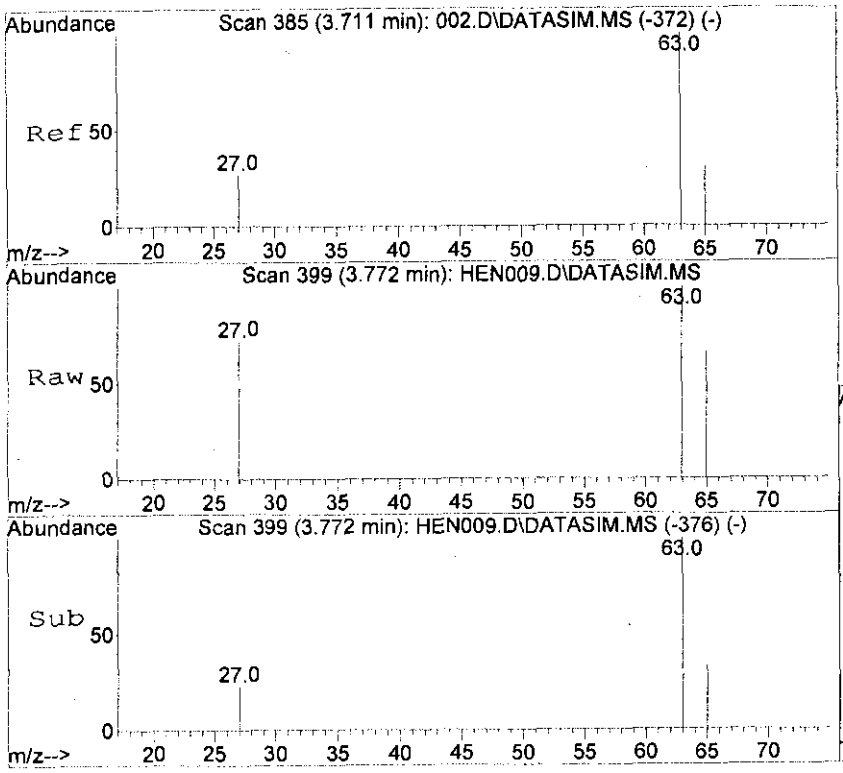


#5
trans-1,2-Dichloroethene
Concen: 0.45 ppbv m
RT: 3.575 min Scan# 358
Delta R.T. 0.000 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 61 Resp: 80

Ion	Ratio	Lower	Upper
61	100		
96	57.5	51.3	76.9
98	36.3	32.7	49.1

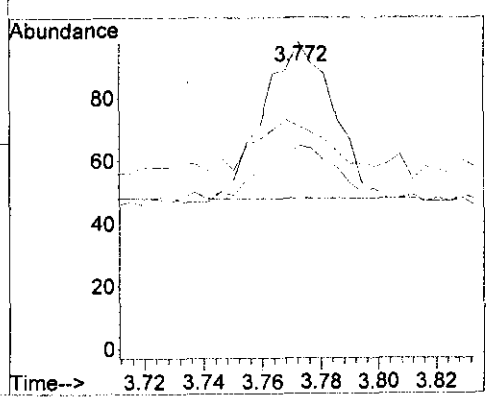


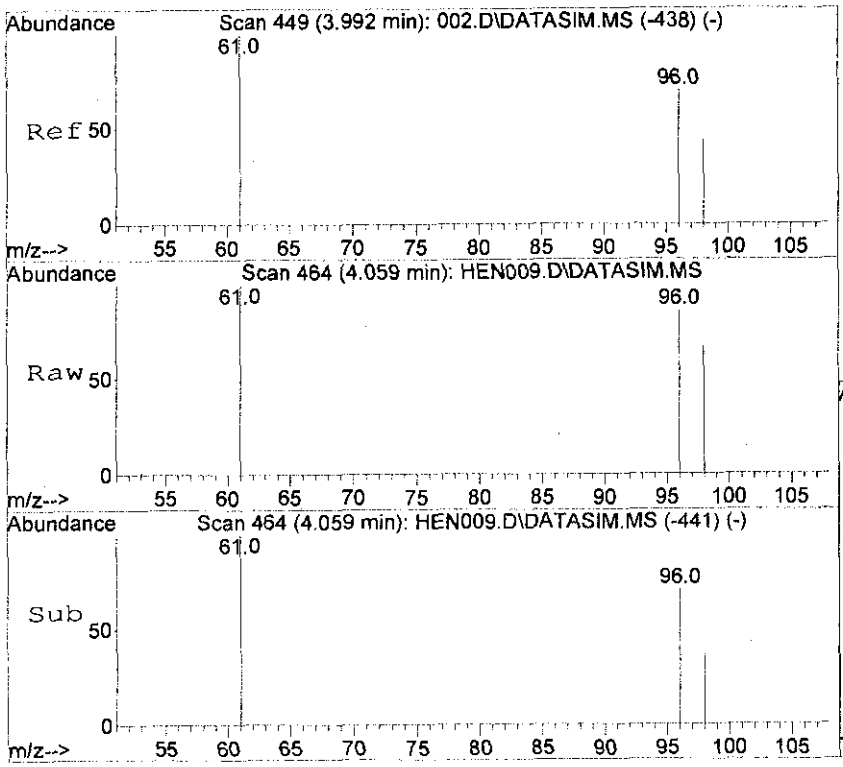


#6
1,1-Dichloroethane
Concen: 0.38 ppbv m
RT: 3.772 min Scan# 399
Delta R.T. 0.000 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 63 Resp: 83

Ion	Ratio	Lower	Upper
63	100		
65	39.8	24.7	37.1#
27	37.3	22.0	33.0#

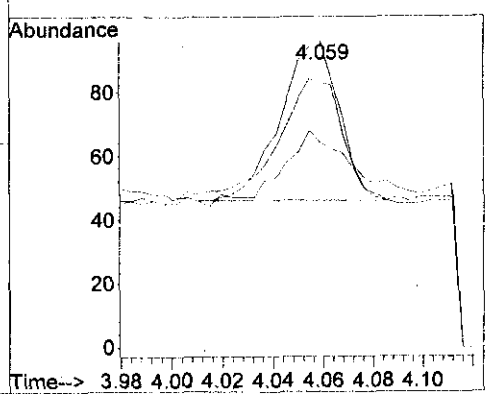


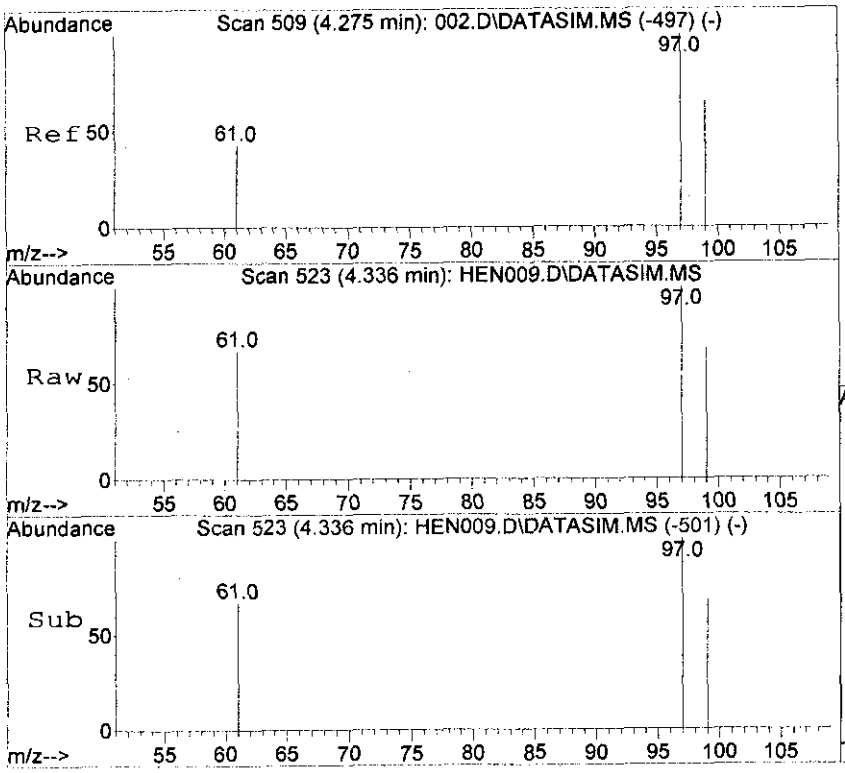


#7
cis-1,2-Dichloroethene
Concen: 0.47 ppbv m
RT: 4.059 min Scan# 464
Delta R.T. 0.000 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 61 Resp: 81

Ion	Ratio	Lower	Upper
61	100		
96	377.8	56.2	84.4#
98	312.3	36.0	54.0#

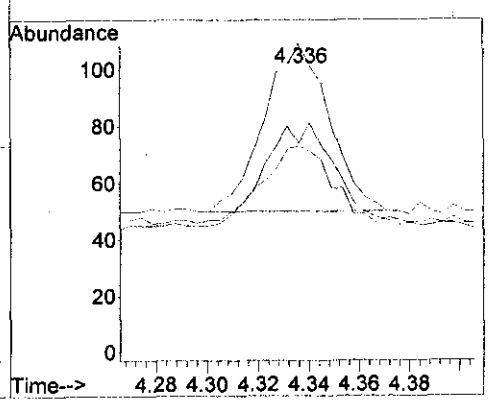


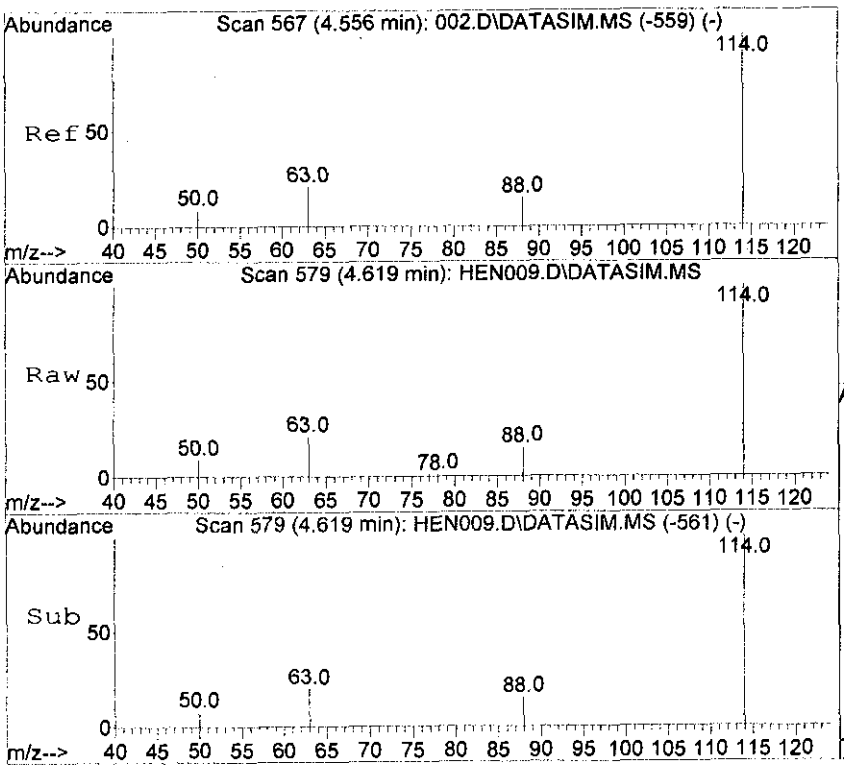


#8
1,1,1-Trichloroethane
Concen: 0.36 ppbv m
RT: 4.336 min Scan# 523
Delta R.T. 0.000 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 97 Resp: 106

Ion	Ratio	Lower	Upper
97	100		
99	61.3	51.5	77.3
61	48.1	35.8	53.8

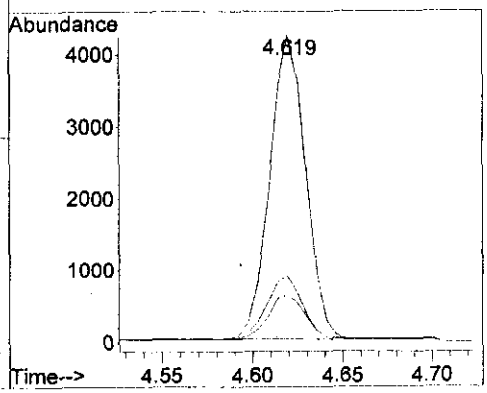


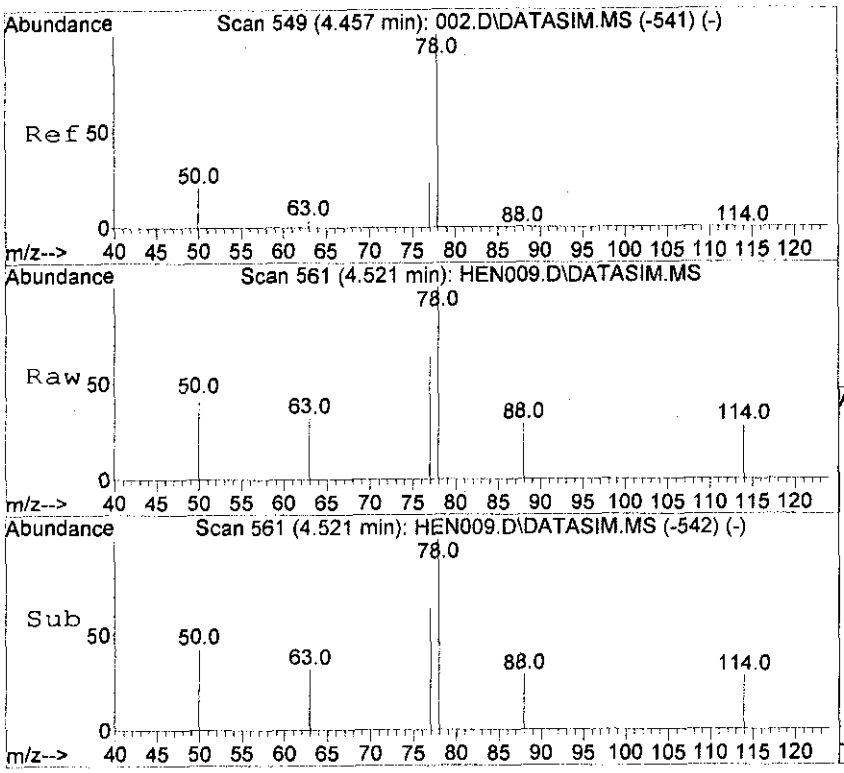


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion:114 Resp: 5806

Ion	Ratio	Lower	Upper
114	100		
63	20.7	16.7	25.1
88	14.9	12.2	18.2

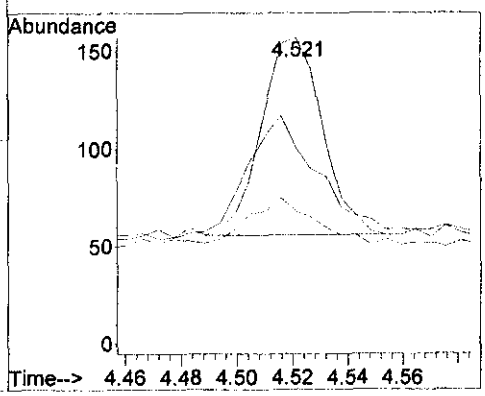


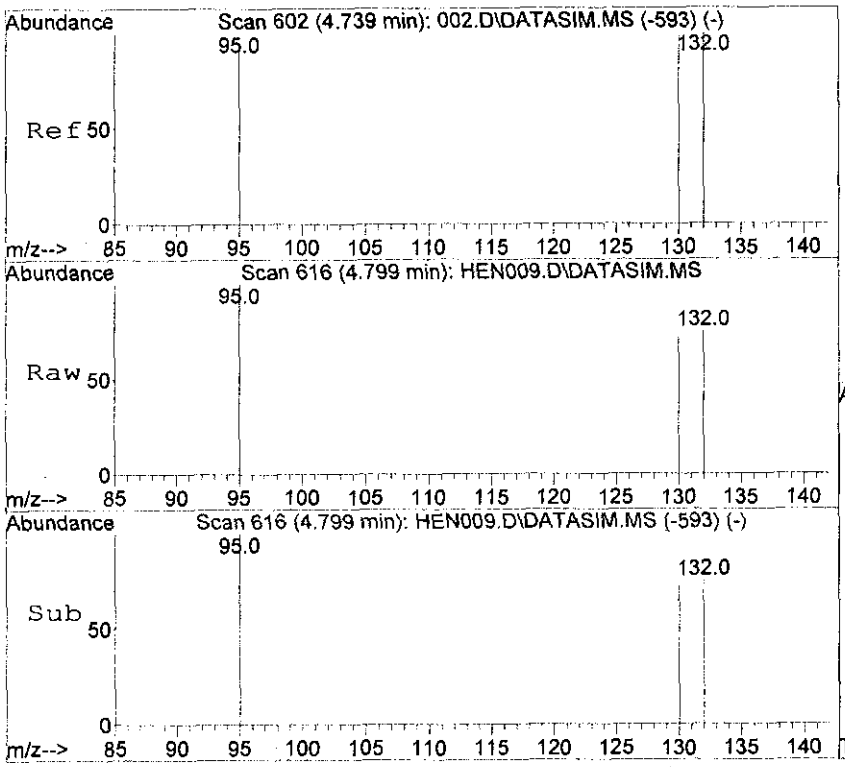


#10
Benzene
Concen: 0.49 ppbv m
RT: 4.521 min Scan# 561
Delta R.T. 0.000 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 78 Resp: 154

Ion	Ratio	Lower	Upper
78	100		
77	74.0	18.2	27.4#
50	22.7	15.9	23.9

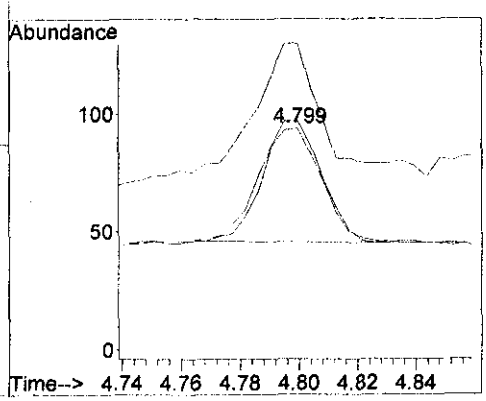


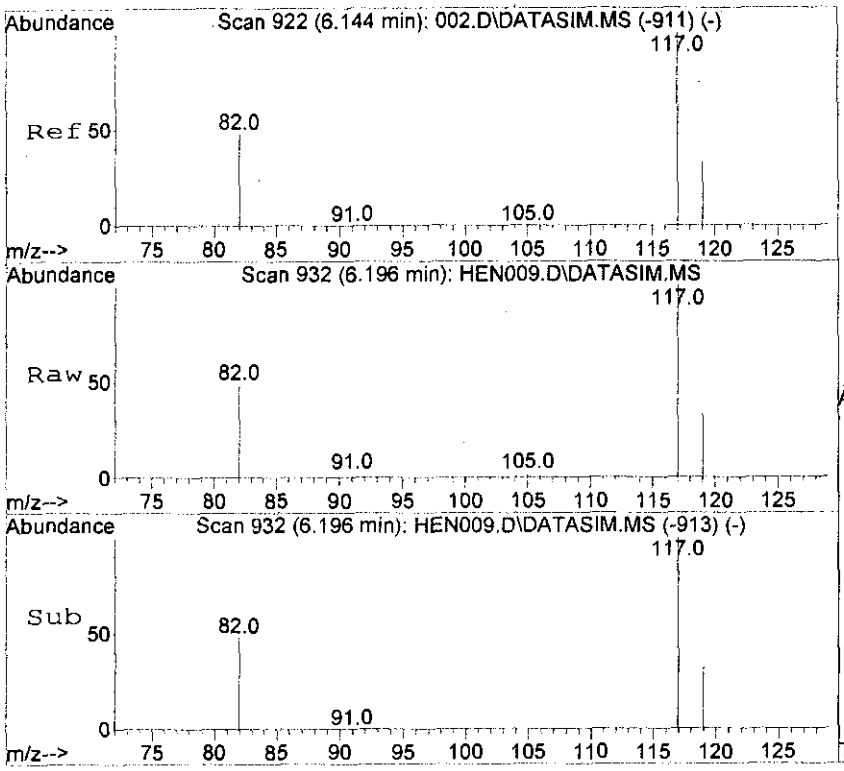


#11
Trichloroethene
Concen: 0.41 ppbv m
RT: 4.799 min Scan# 616
Delta R.T. 0.003 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion:130 Resp: 71

Ion	Ratio	Lower	Upper
130	100		
132	102.8	80.4	120.6
95	93.0	78.6	118.0

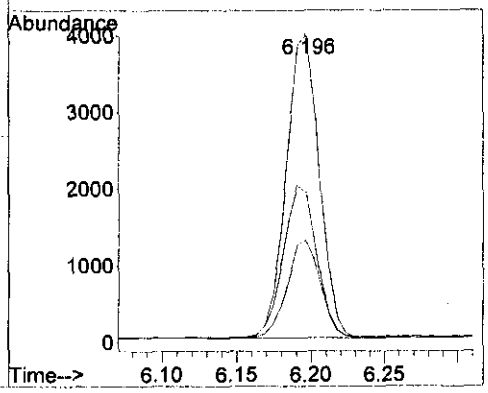


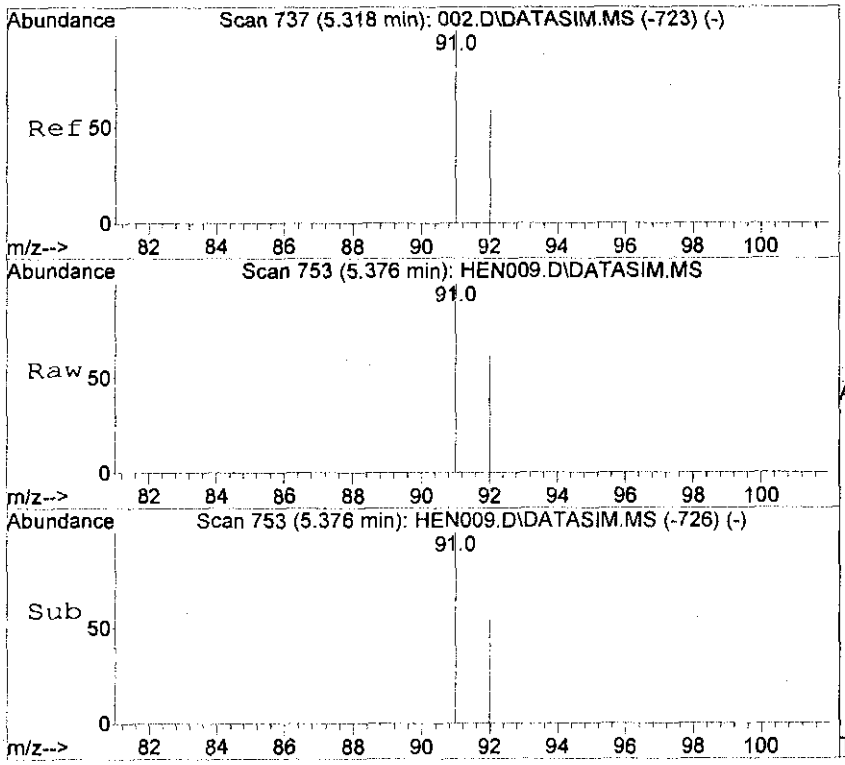


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. 0.004 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion:117 Resp: 6139

Ion	Ratio	Lower	Upper
117	100		
82	50.1	41.4	62.0
119	32.4	25.8	38.6

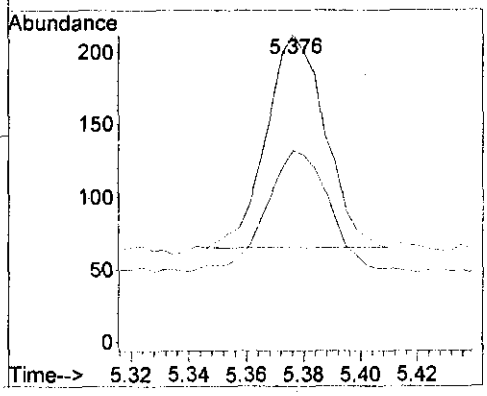


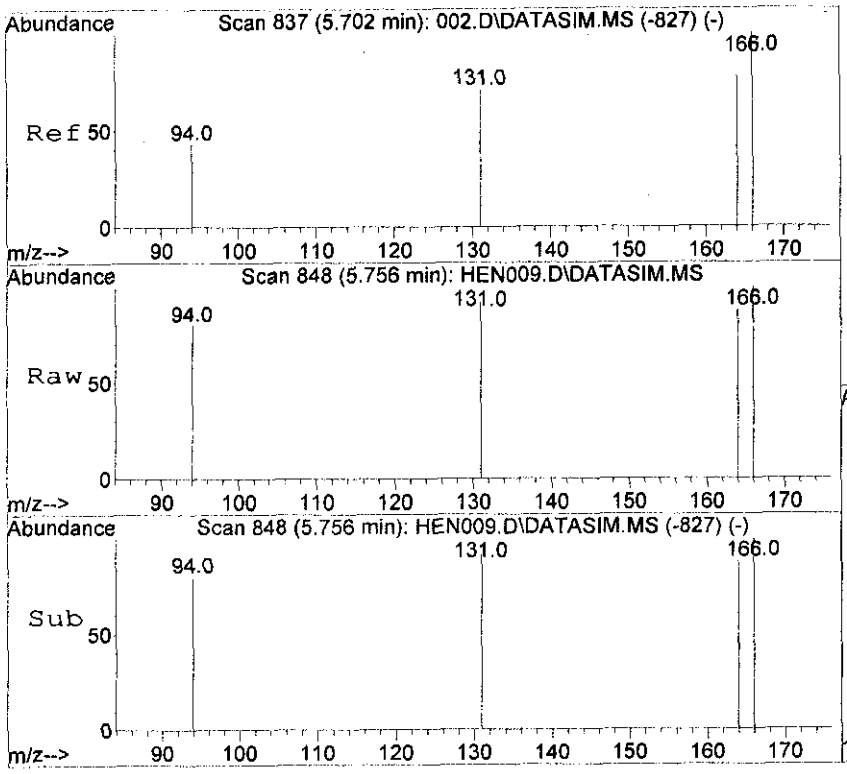


#13
Toluene
Concen: 0.49 ppbv m
RT: 5.376 min Scan# 753
Delta R.T. -0.001 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 91 Resp: 209

Ion	Ratio	Lower	Upper
91	100		
92	63.6	47.4	71.2

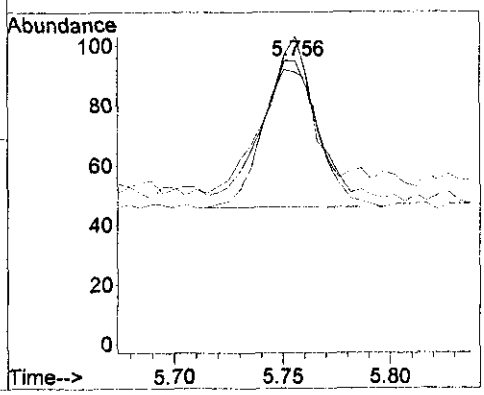


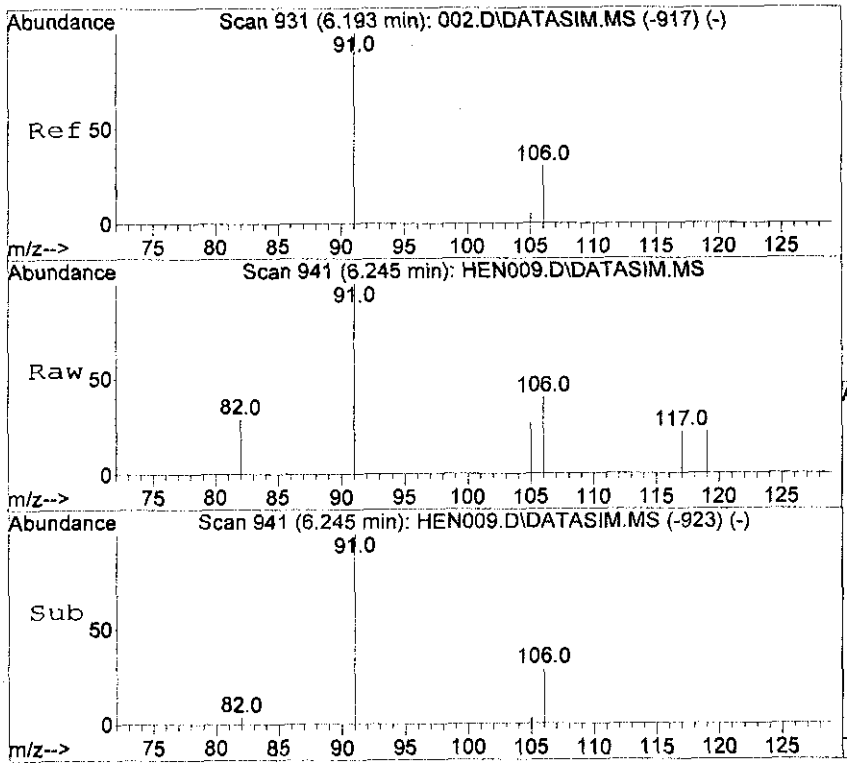


#14
Tetrachloroethene
Concen: 0.40 ppbv m
RT: 5.756 min Scan# 848
Delta R.T. 0.004 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion:166 Resp: 90

Ion	Ratio	Lower	Upper
166	100		
164	104.4	62.5	93.7#
131	87.8	57.0	85.4#

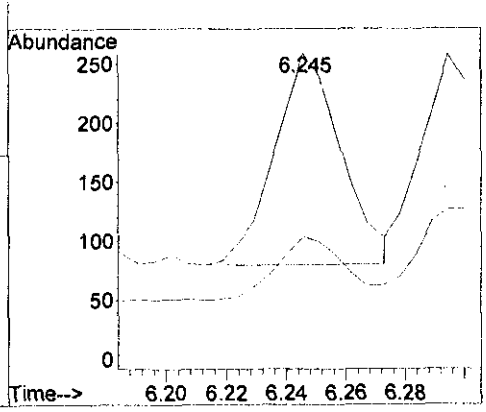


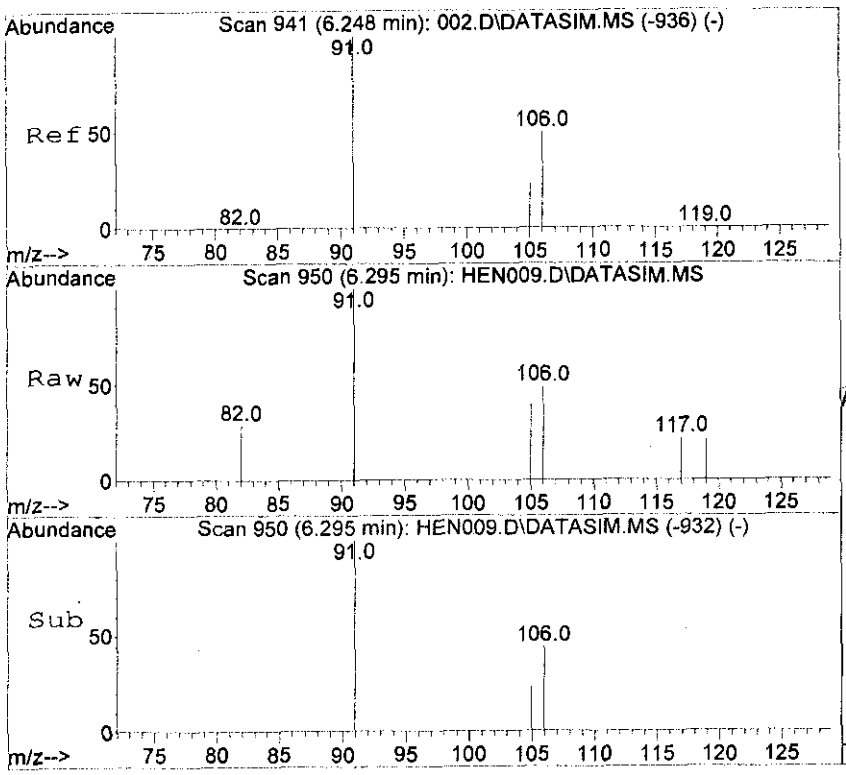


#15
Ethyl Benzene
Concen: 0.51 ppbv m
RT: 6.245 min Scan# 941
Delta R.T. -0.001 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 91 Resp: 279

Ion	Ratio	Lower	Upper
91	100		
106	40.2	23.9	35.9#

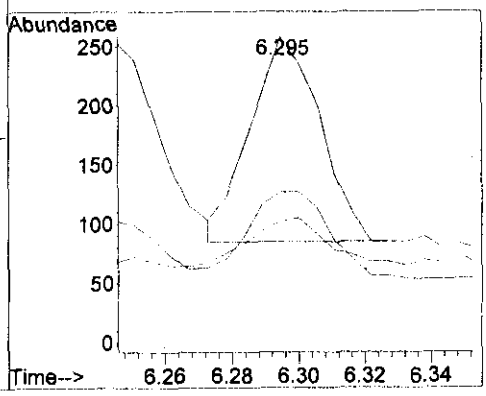


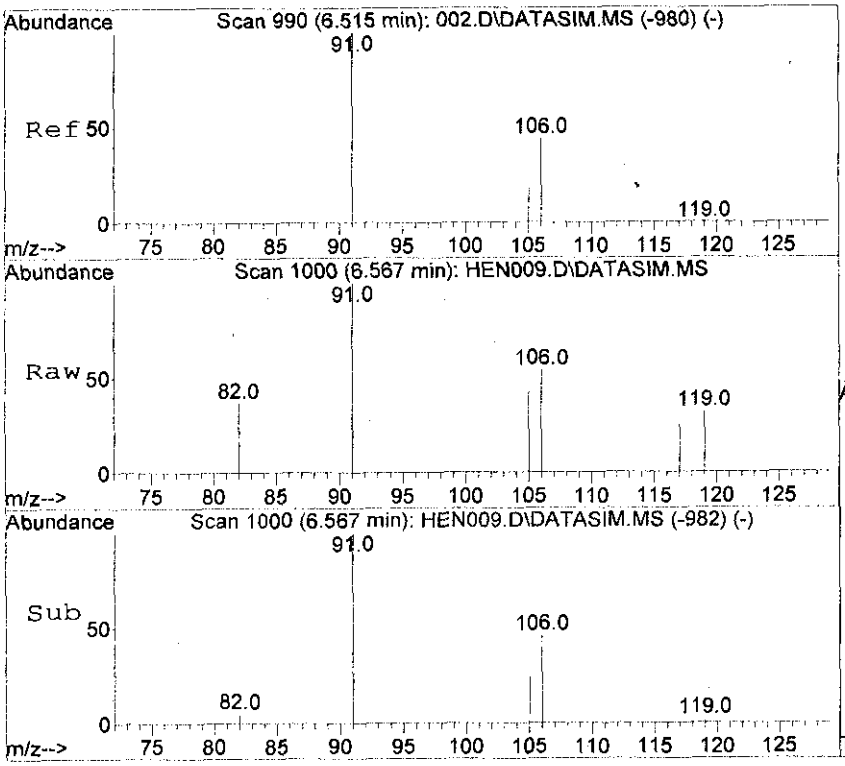


#16
m,p-Xylene
Concen: 0.60 ppbv m
RT: 6.295 min Scan# 950
Delta R.T. -0.001 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 91 Resp: 252

Ion	Ratio	Lower	Upper
91	100		
106	49.2	37.3	55.9
105	39.5	16.7	25.1#

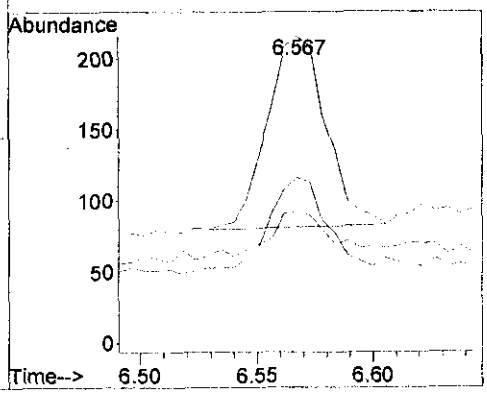




#17
o-Xylene
Concen: 0.54 ppbv m
RT: 6.567 min Scan# 1000
Delta R.T. -0.001 min
Lab File: HEN009.D
Acq: 16 Mar 2012 15:15

Tgt Ion: 91 Resp: 236

Ion	Ratio	Lower	Upper
91	100		
106	51.3	35.8	53.8
105	35.6	14.2	21.4#



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN010.D
Acq On : 16 Mar 2012 15:34
Operator : SJT
Sample : STD20120316-7 \ 500ppbv ICV STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 15:40:45 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:37:46 2012
QLast Update : Fri Mar 16 15:38:59 2012
Response via : Initial Calibration

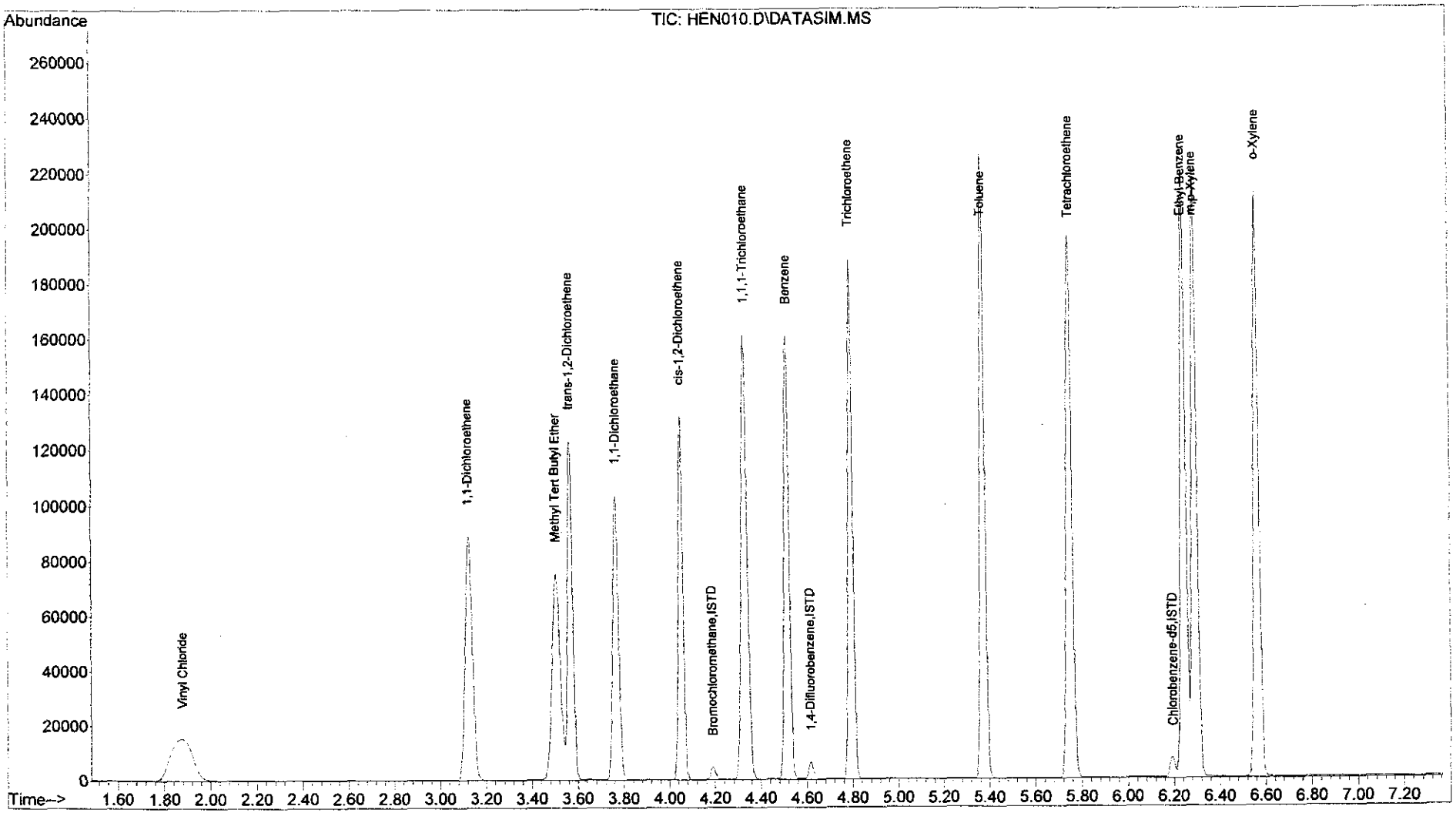
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.191	49	2505	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.618	114	5967	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	6246	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Vinyl Chloride	1.882	62	55824	533.73	ppbv	99
3) 1,1-Dichloroethene	3.127	61	107412	569.57	ppbv	100
4) Methyl Tert Butyl Ether	3.509	73	149069	531.68	ppbv	99
5) trans-1,2-Dichloroethene	3.569	61	92810	551.62	ppbv	99
6) 1,1-Dichloroethane	3.771	63	114114	573.45	ppbv	99
7) cis-1,2-Dichloroethene	4.053	61	87941	546.99	ppbv	99
8) 1,1,1-Trichloroethane	4.335	97	145455	542.19	ppbv	100
10) Benzene	4.520	78	165703	545.95	ppbv	100
11) Trichloroethene	4.795	130	87065	541.94	ppbv	99
13) Toluene	5.376	91	207258	538.66	ppbv	100
14) Tetrachloroethene	5.756	166	114336	556.80	ppbv	100
15) Ethyl Benzene	6.246	91	265703	530.95	ppbv	100
16) m,p-Xylene	6.295	91	201038	519.89	ppbv	99
17) o-Xylene	6.567	91	206760	529.42	ppbv	100

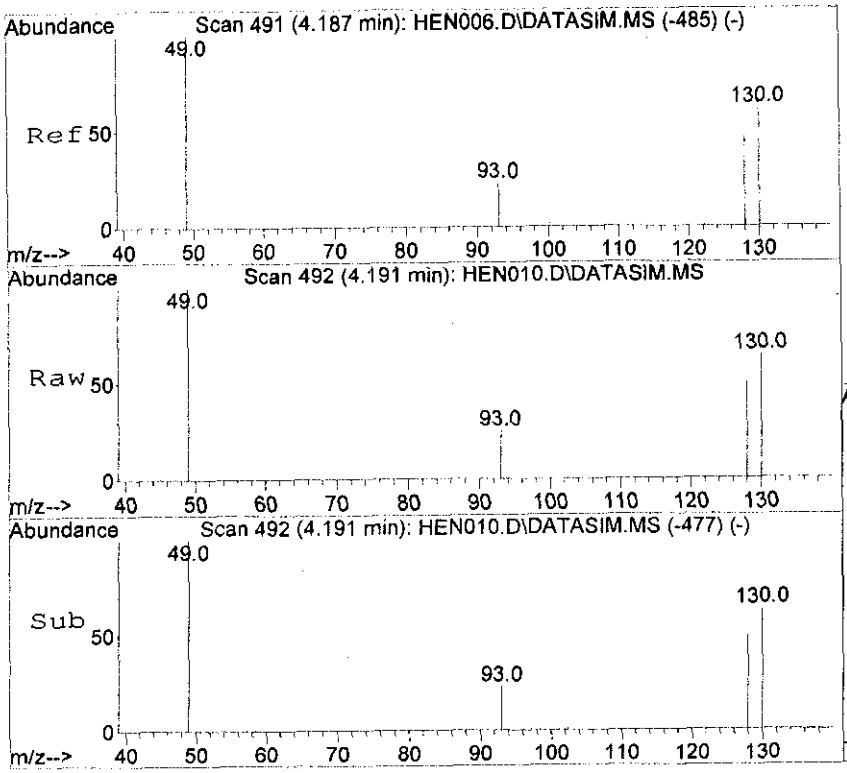
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN010.D
Acq On : 16 Mar 2012 15:34
Operator : SJT
Sample : STD20120316-7 \ 500ppbv ICV STD
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 15:40:45 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:37:46 2012
QLast Update : Fri Mar 16 15:38:59 2012
Response via : Initial Calibration

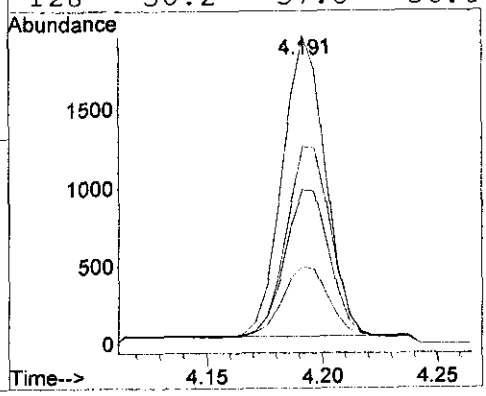


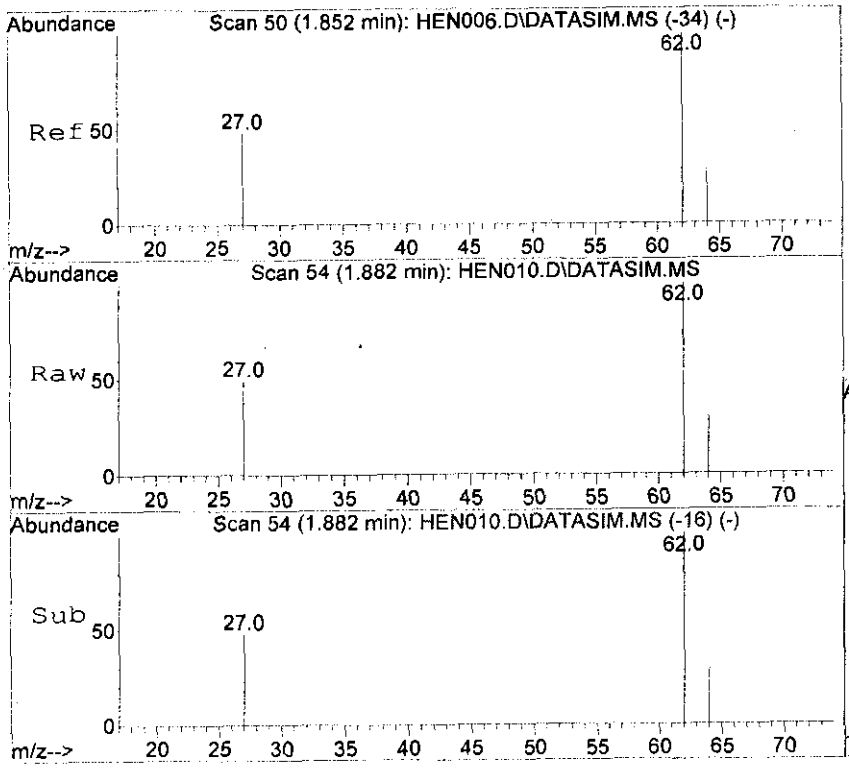


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.191 min Scan# 492
Delta R.T. 0.004 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 49 Resp: 2505

Ion	Ratio	Lower	Upper
49	100		
130	64.1	46.5	69.7
93	25.3	19.0	28.6
128	50.2	37.8	56.6

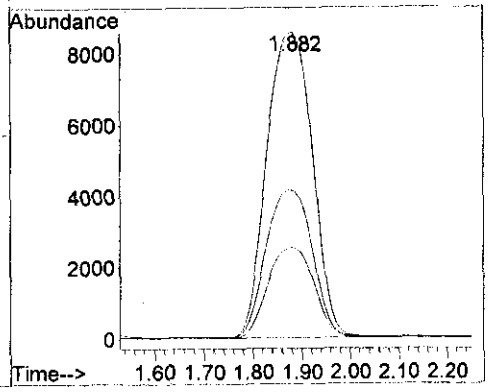


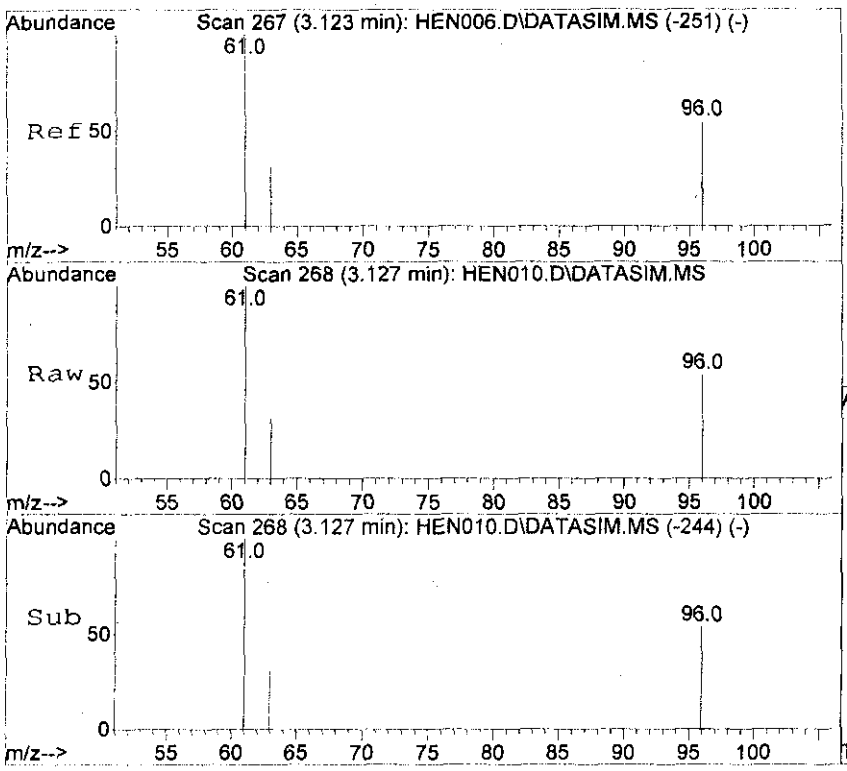


#2
Vinyl Chloride
Concen: 533.73 ppbv
RT: 1.882 min Scan# 54
Delta R.T. 0.030 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 62 Resp: 55824

Ion	Ratio	Lower	Upper
62	100		
64	29.7	23.7	35.5
27	48.6	39.8	59.8

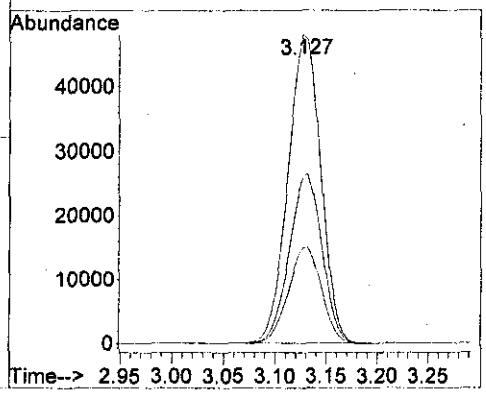


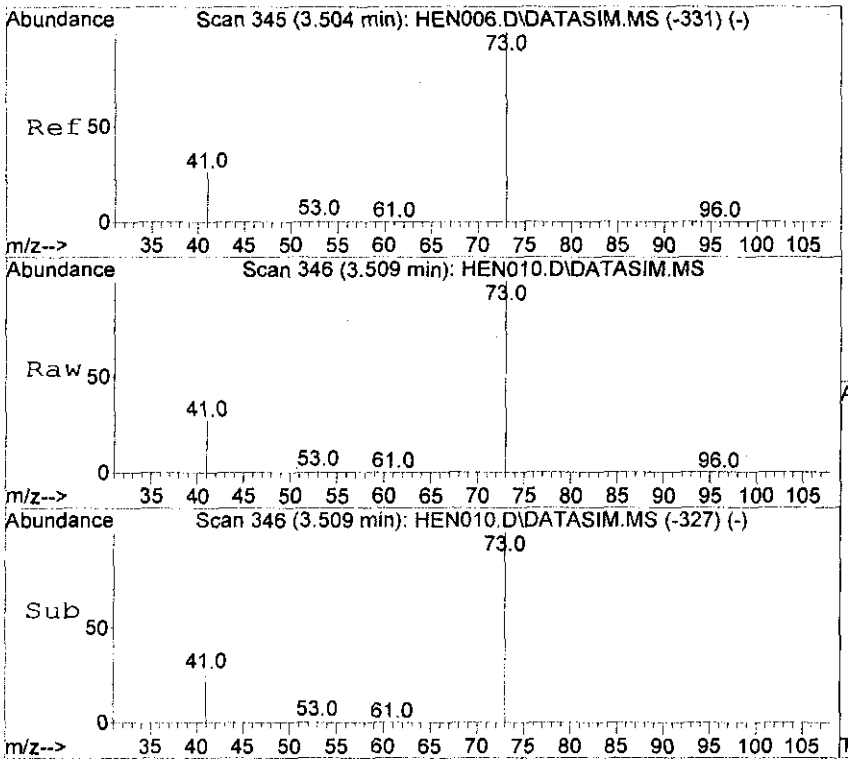


#3
1,1-Dichloroethene
Concen: 569.57 ppbv
RT: 3.127 min Scan# 268
Delta R.T. 0.004 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 61 Resp: 107412

Ion	Ratio	Lower	Upper
61	100		
96	54.7	43.8	65.6
63	31.4	25.1	37.7

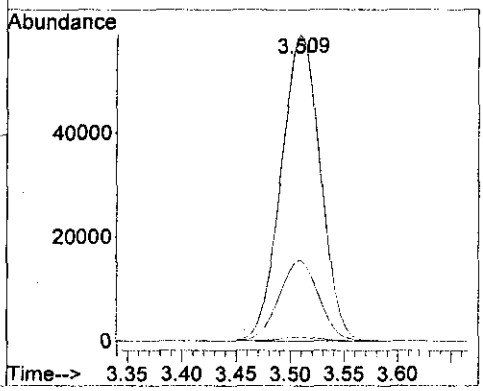


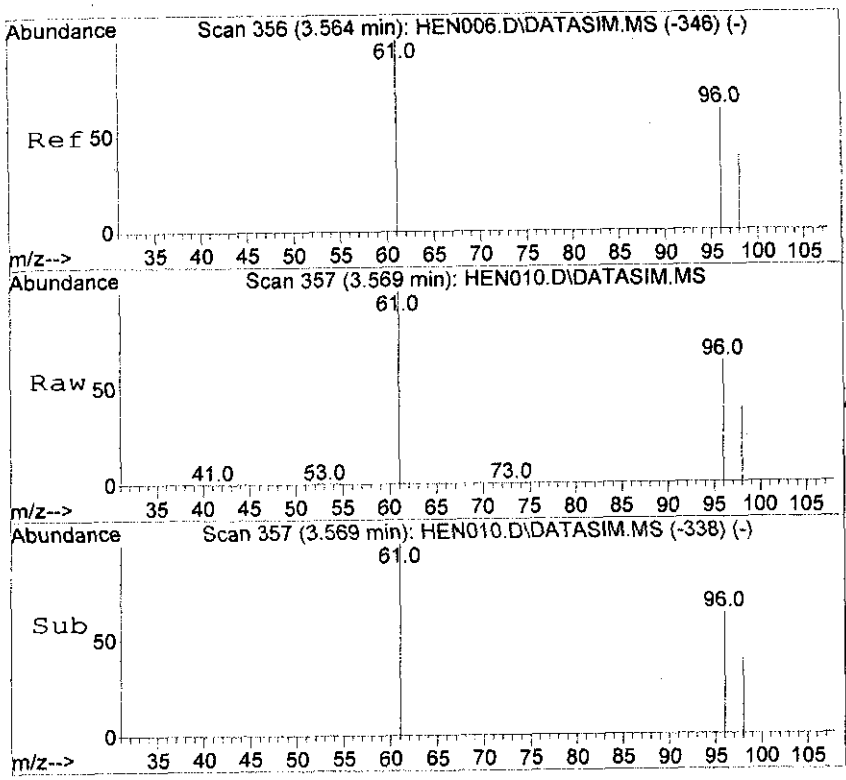


#4
Methyl Tert Butyl Ether
Concen: 531.68 ppbv
RT: 3.509 min Scan# 346
Delta R.T. 0.004 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 73 Resp: 149069

Ion	Ratio	Lower	Upper
73	100		
53	1.4	1.1	1.7
41	26.6	21.8	32.6

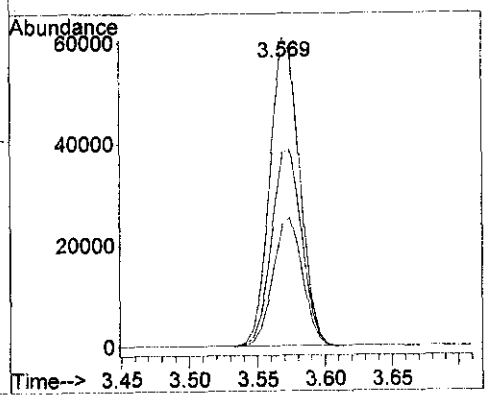


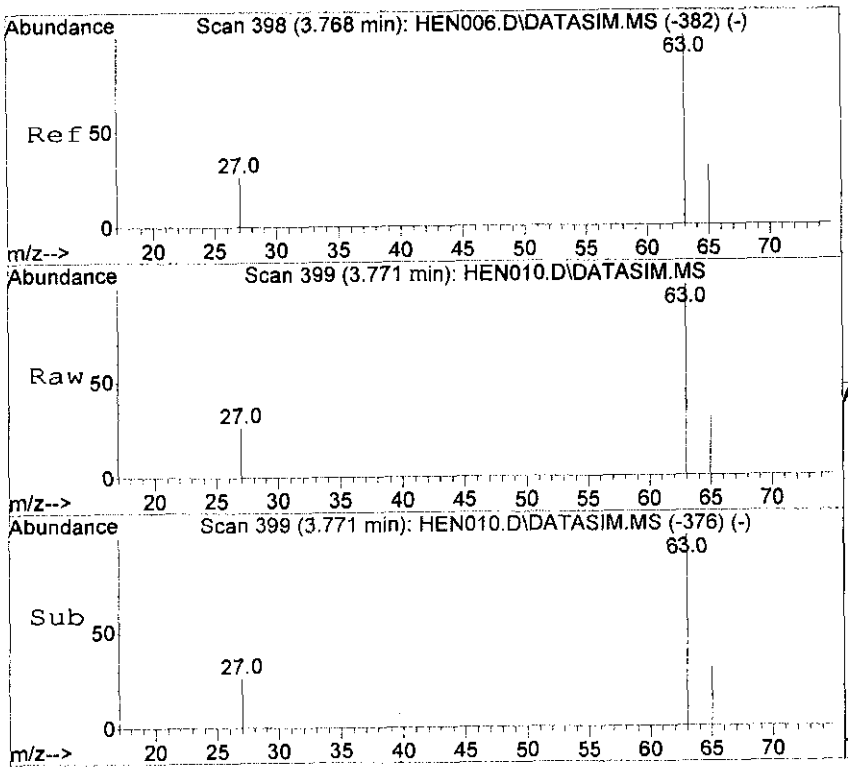


#5
trans-1,2-Dichloroethene
Concen: 551.62 ppbv
RT: 3.569 min Scan# 357
Delta R.T. 0.004 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 61 Resp: 92810

Ion	Ratio	Lower	Upper
61	100		
96	64.6	51.3	76.9
98	41.4	32.7	49.1

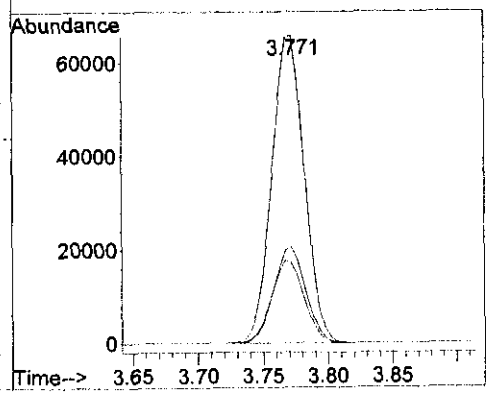


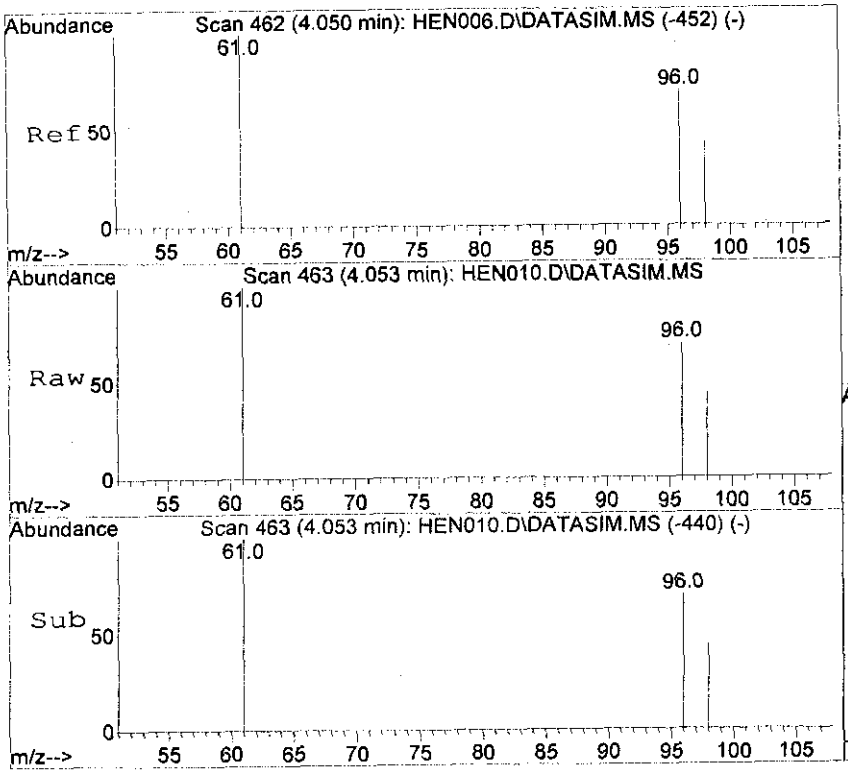


#6
1,1-Dichloroethane
Concen: 573.45 ppbv
RT: 3.771 min Scan# 399
Delta R.T. 0.003 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 63 Resp: 114114

Ion	Ratio	Lower	Upper
63	100		
65	30.8	24.7	37.1
27	26.8	22.0	33.0

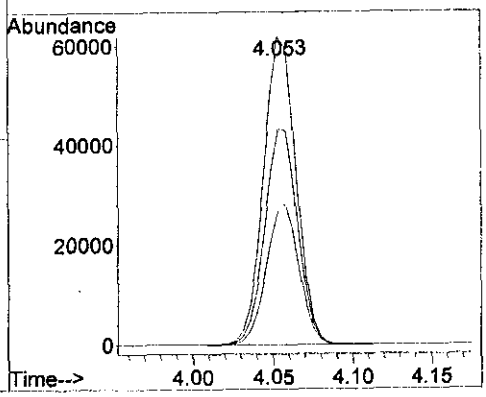


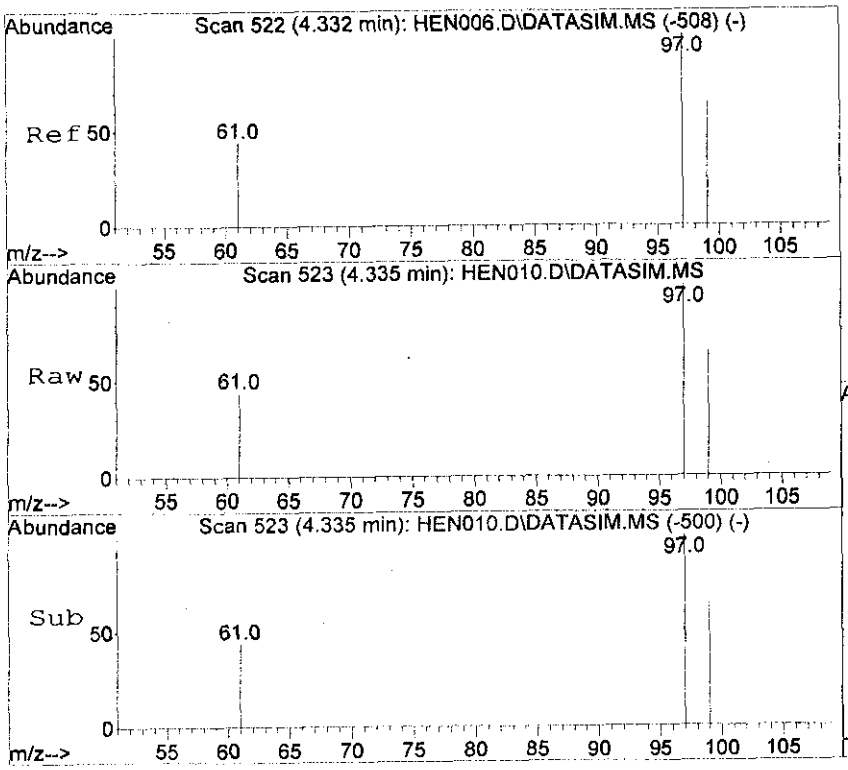


#7
cis-1,2-Dichloroethene
Concen: 546.99 ppbv
RT: 4.053 min Scan# 463
Delta R.T. 0.003 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 61 Resp: 87941

Ion	Ratio	Lower	Upper
61	100		
96	70.8	56.2	84.4
98	45.5	36.0	54.0

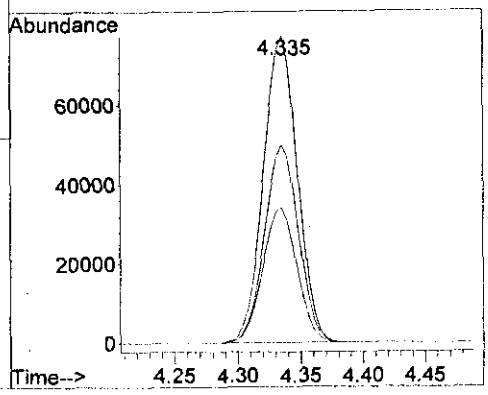


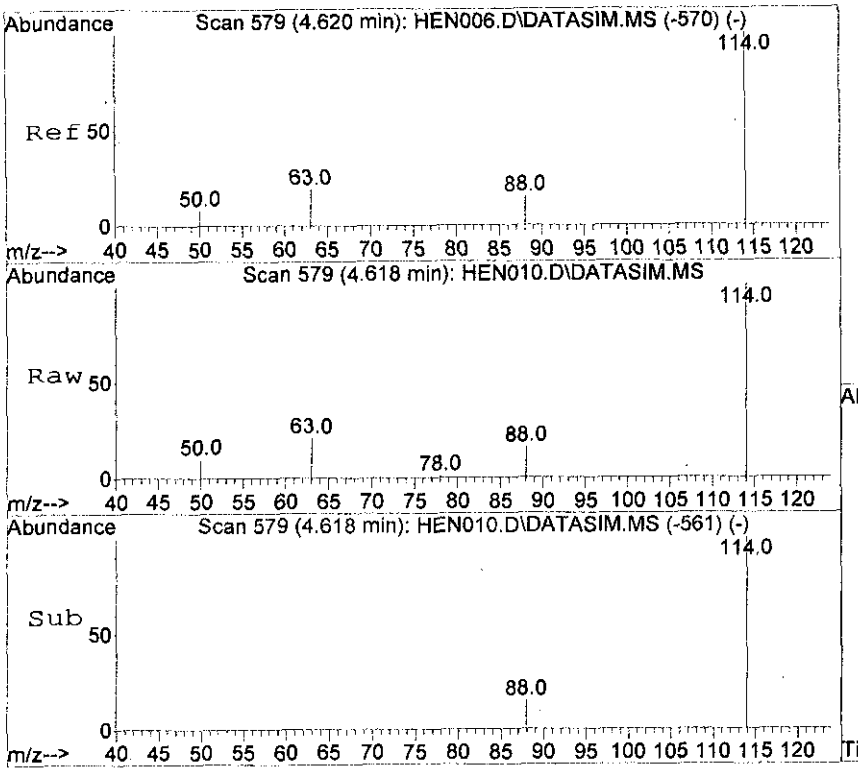


#8
1,1,1-Trichloroethane
Concen: 542.19 ppbv
RT: 4.335 min Scan# 523
Delta R.T. 0.003 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 97 Resp: 145455

Ion	Ratio	Lower	Upper
97	100		
99	64.4	51.5	77.3
61	44.5	35.8	53.8

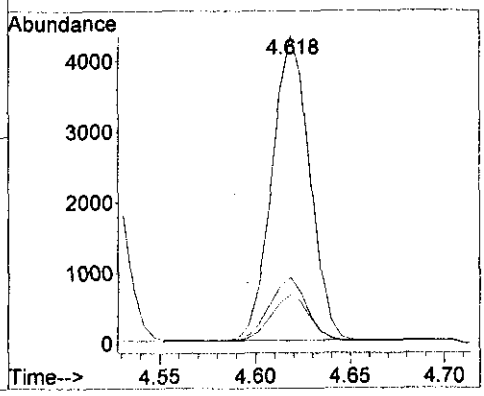


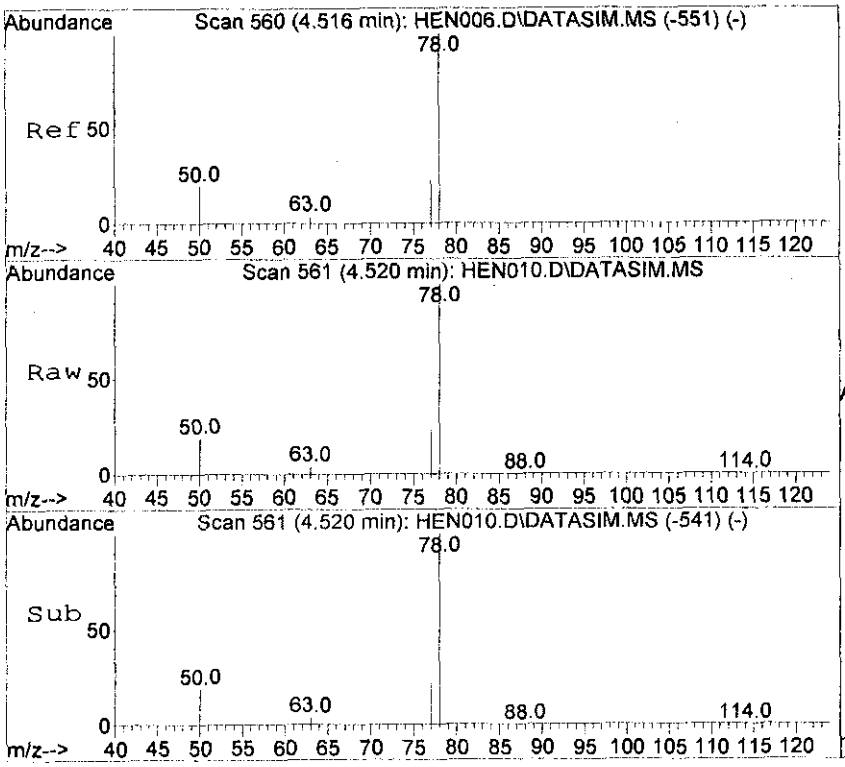


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.618 min Scan# 579
Delta R.T. -0.001 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion:114 Resp: 5967

Ion	Ratio	Lower	Upper
114	100		
63	20.1	16.7	25.1
88	15.1	12.2	18.2

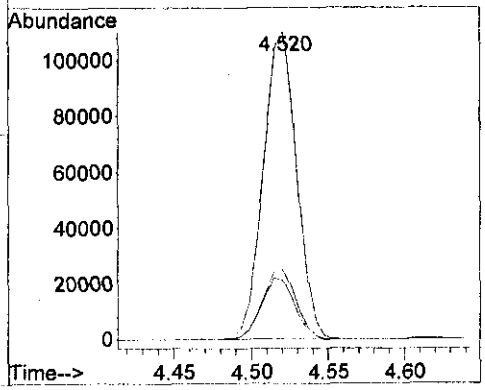


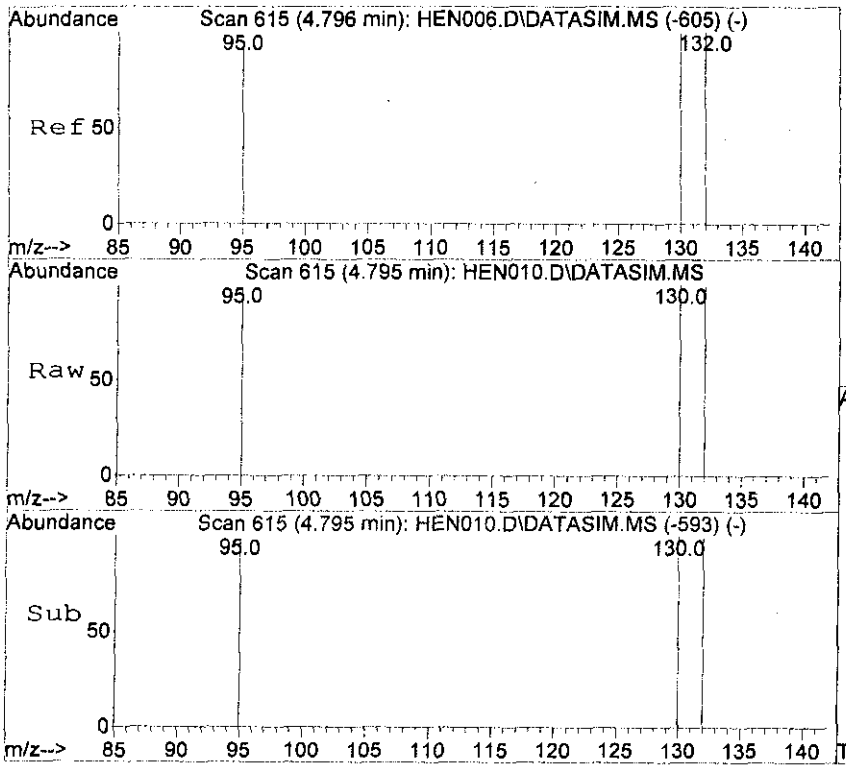


#10
Benzene
Concen: 545.95 ppbv
RT: 4.520 min Scan# 561
Delta R.T. 0.004 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 78 Resp: 165703

Ion	Ratio	Lower	Upper
78	100		
77	22.9	18.2	27.4
50	20.2	15.9	23.9

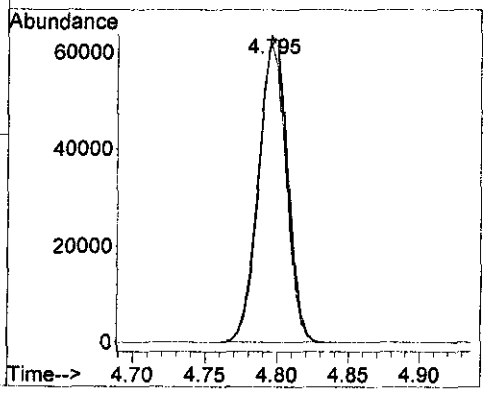


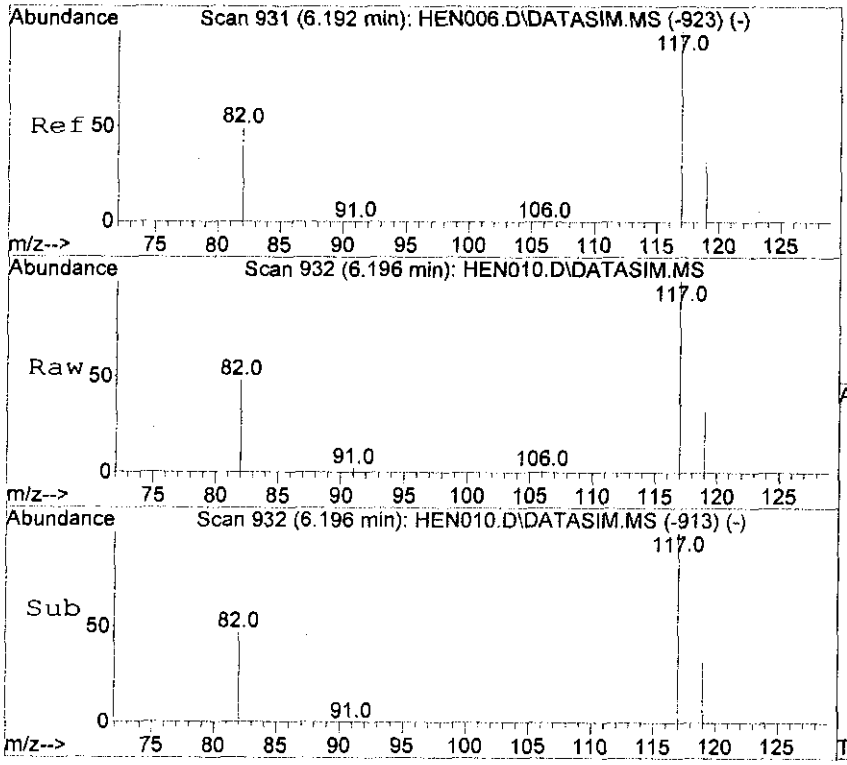


#11
Trichloroethene
Concen: 541.94 ppbv
RT: 4.795 min Scan# 615
Delta R.T. -0.001 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion:130 Resp: 87065

Ion	Ratio	Lower	Upper
130	100		
132	100.9	80.4	120.6
95	96.9	78.6	118.0

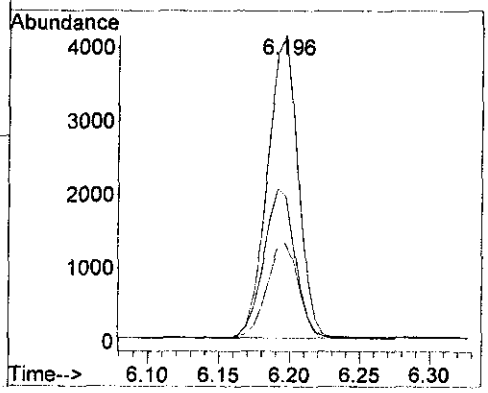


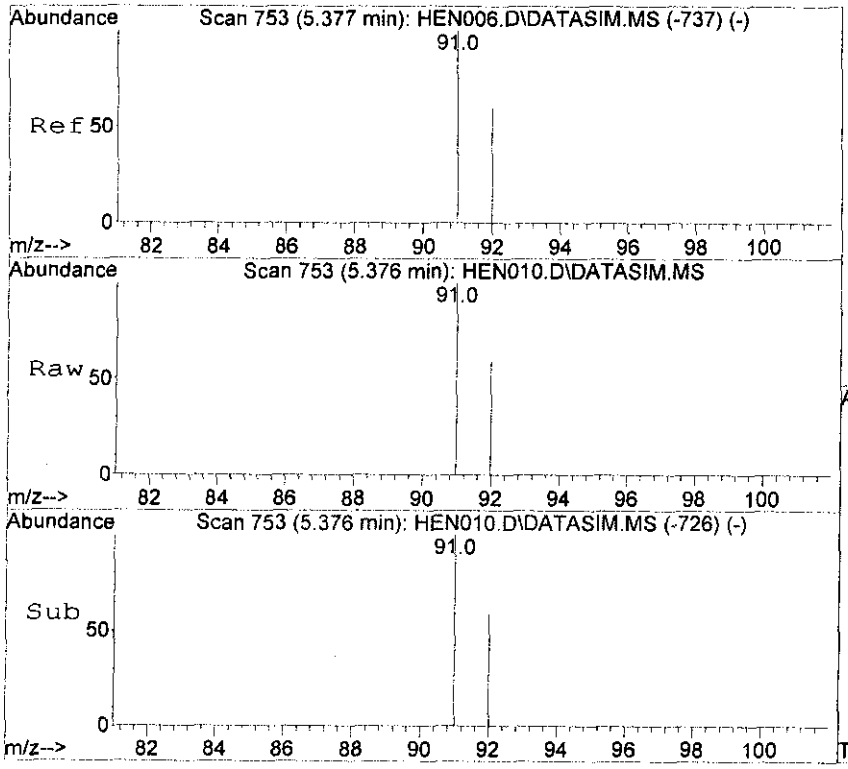


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. 0.004 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion:117 Resp: 6246

Ion	Ratio	Lower	Upper
117	100		
82	50.5	41.4	62.0
119	32.6	25.8	38.6

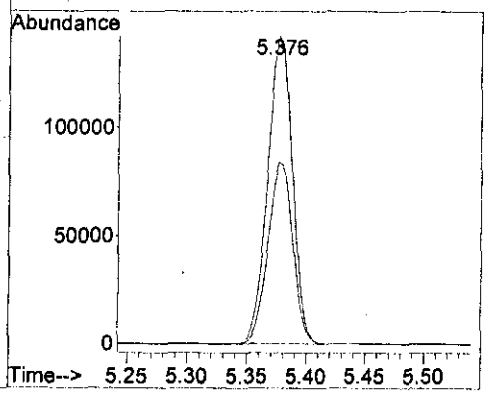


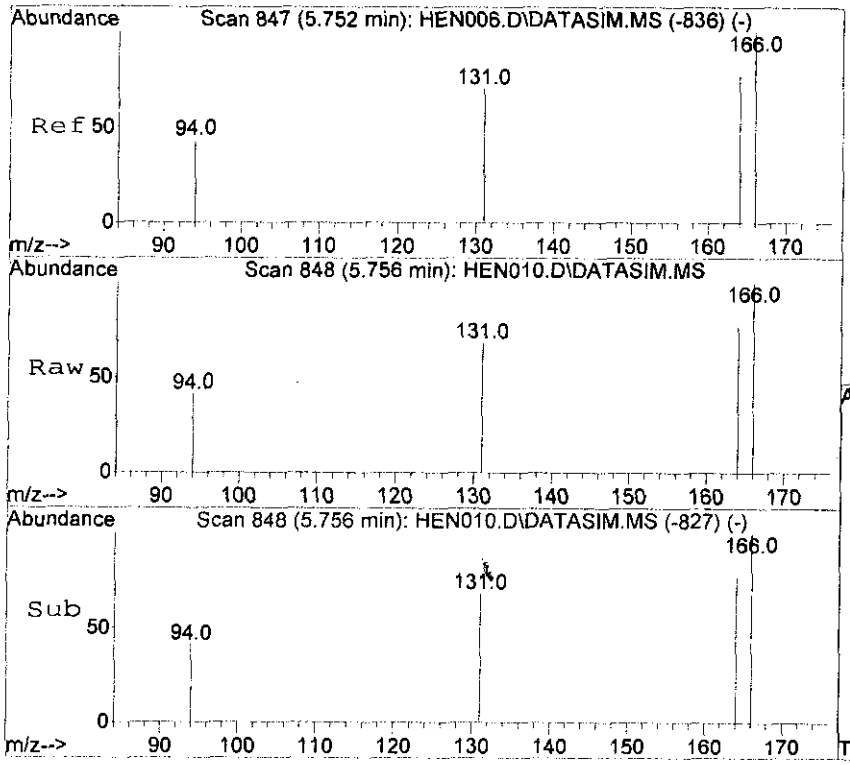


#13
Toluene
Concen: 538.66 ppbv
RT: 5.376 min Scan# 753
Delta R.T. -0.001 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 91 Resp: 207258

Ion	Ratio	Lower	Upper
91	100		
92	59.2	47.4	71.2

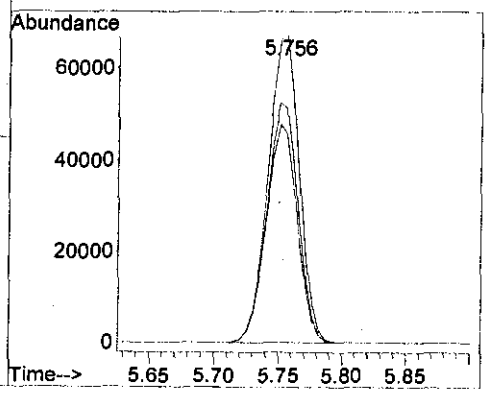


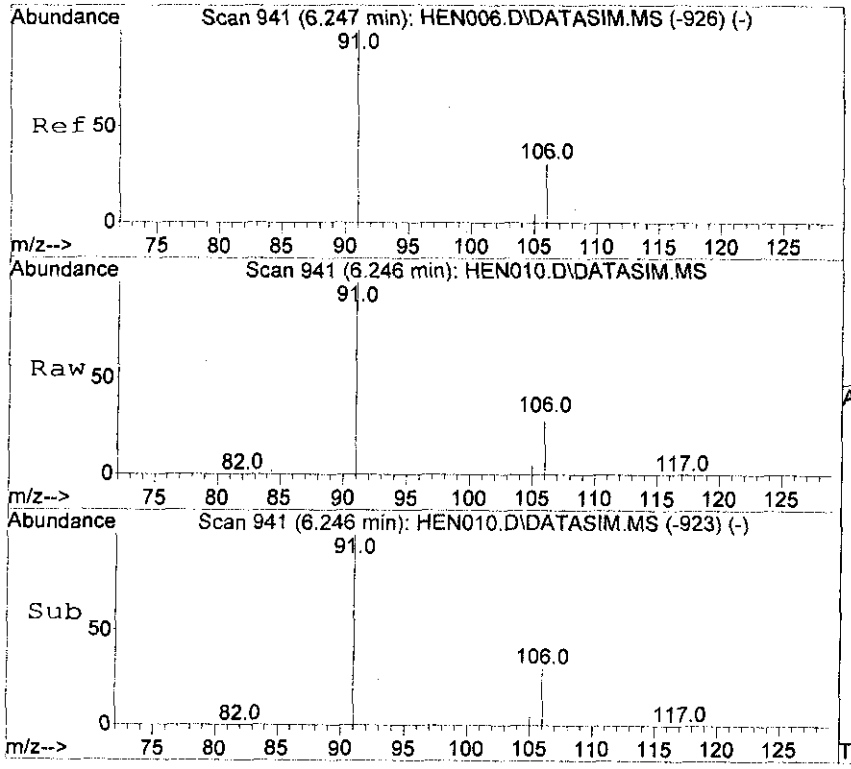


#14
Tetrachloroethene
Concen: 556.80 ppbv
RT: 5.756 min Scan# 848
Delta R.T. 0.004 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion:166 Resp: 114336

Ion	Ratio	Lower	Upper
166	100		
164	78.2	62.5	93.7
131	70.8	57.0	85.4

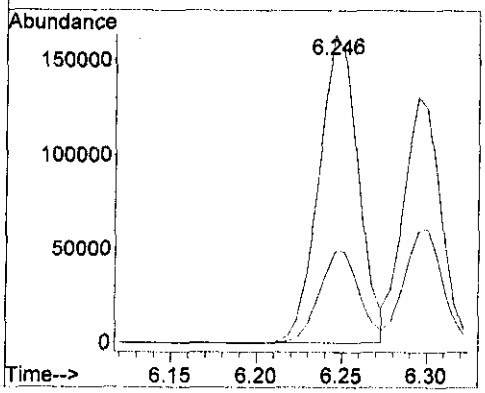


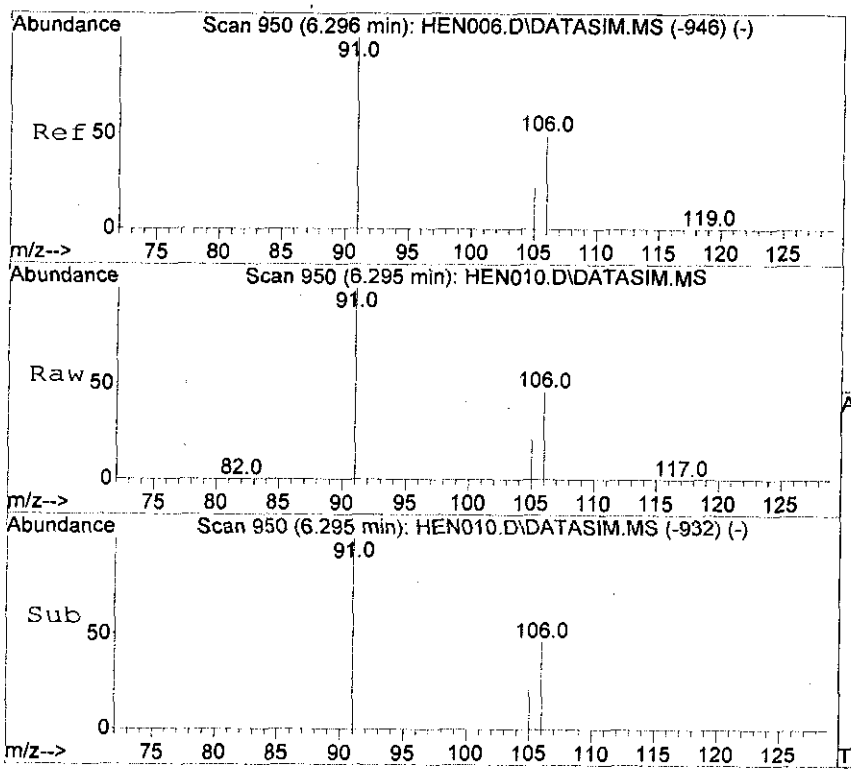


#15
Ethyl Benzene
Concen: 530.95 ppbv
RT: 6.246 min Scan# 941
Delta R.T. -0.001 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 91 Resp: 265703

Ion	Ratio	Lower	Upper
91	100		
106	29.9	23.9	35.9

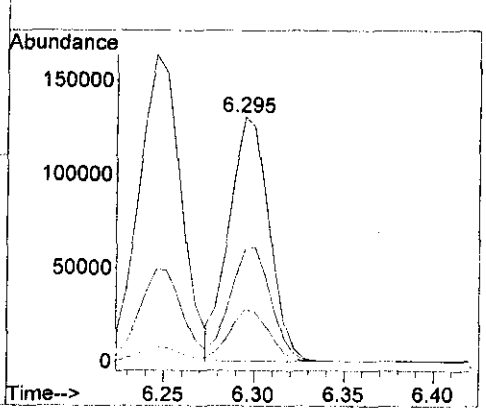


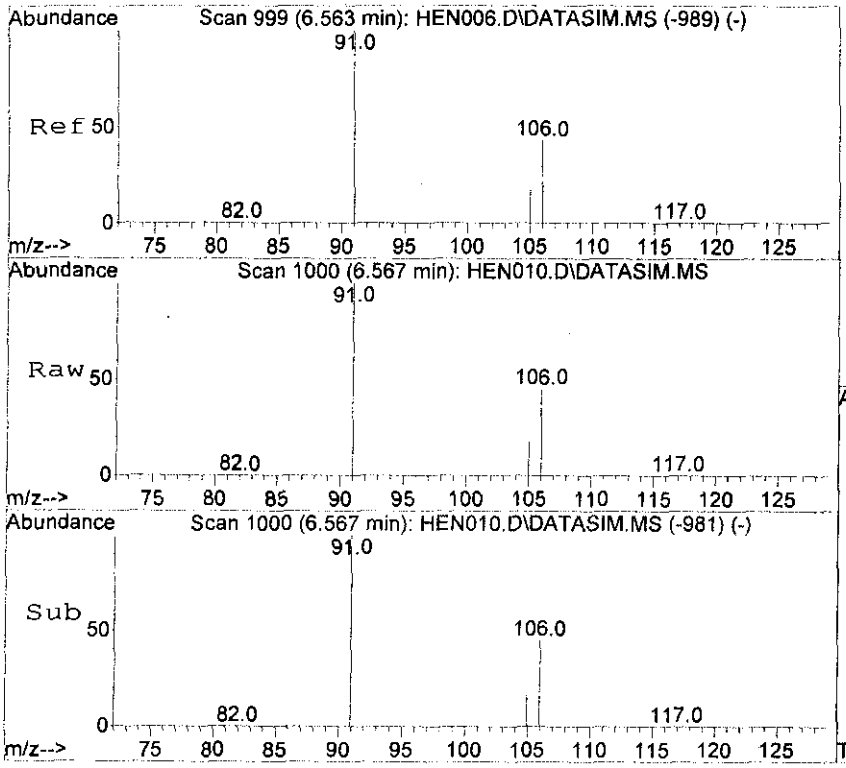


#16
m,p-Xylene
Concen: 519.89 ppbv
RT: 6.295 min Scan# 950
Delta R.T. -0.001 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 91 Resp: 201038

Ion	Ratio	Lower	Upper
91	100		
106	45.9	37.3	55.9
105	21.0	16.7	25.1

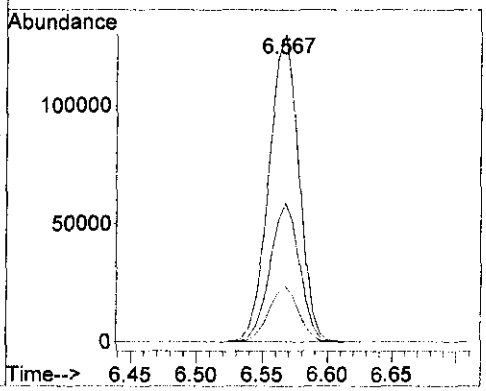




#17
o-Xylene
Concen: 529.42 ppbv
RT: 6.567 min Scan# 1000
Delta R.T. 0.004 min
Lab File: HEN010.D
Acq: 16 Mar 2012 15:34

Tgt Ion: 91 Resp: 206760

Ion	Ratio	Lower	Upper
91	100		
106	44.7	35.8	53.8
105	17.8	14.2	21.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN011.D
Acq On : 16 Mar 2012 15:45
Operator : SJT
Sample : STD20120316-MB \ Method Blank
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 15:52:24 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:38:59 2012
QLast Update : Fri Mar 16 15:38:59 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.192	49	2504	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5896	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	6277	10.00	ppbv	0.00

System Monitoring Compounds

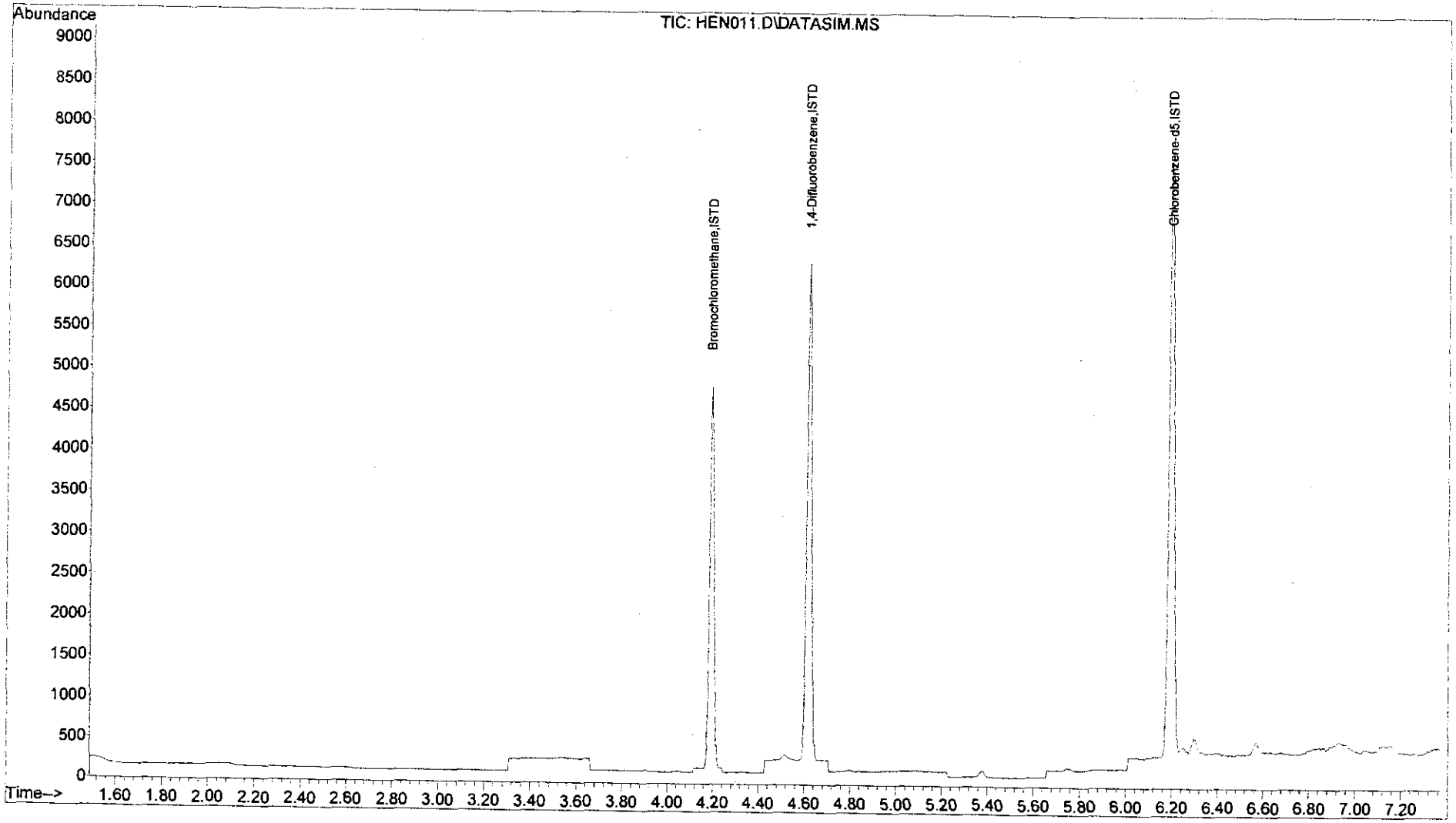
Target Compounds	Qvalue

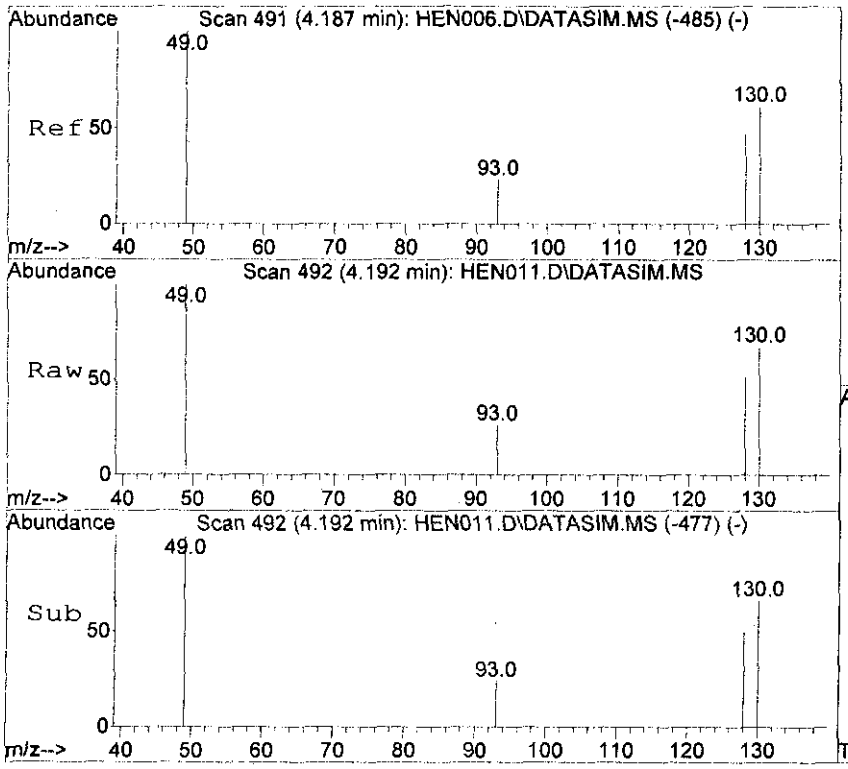
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN011.D
Acq On : 16 Mar 2012 15:45
Operator : SJT
Sample : STD20120316-MB \ Method Blank
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 15:52:24 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:38:59 2012
QLast Update : Fri Mar 16 15:38:59 2012
Response via : Initial Calibration

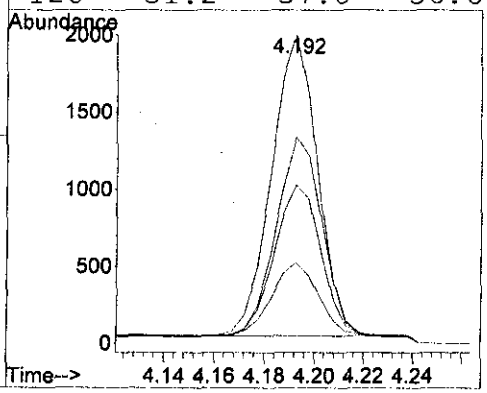


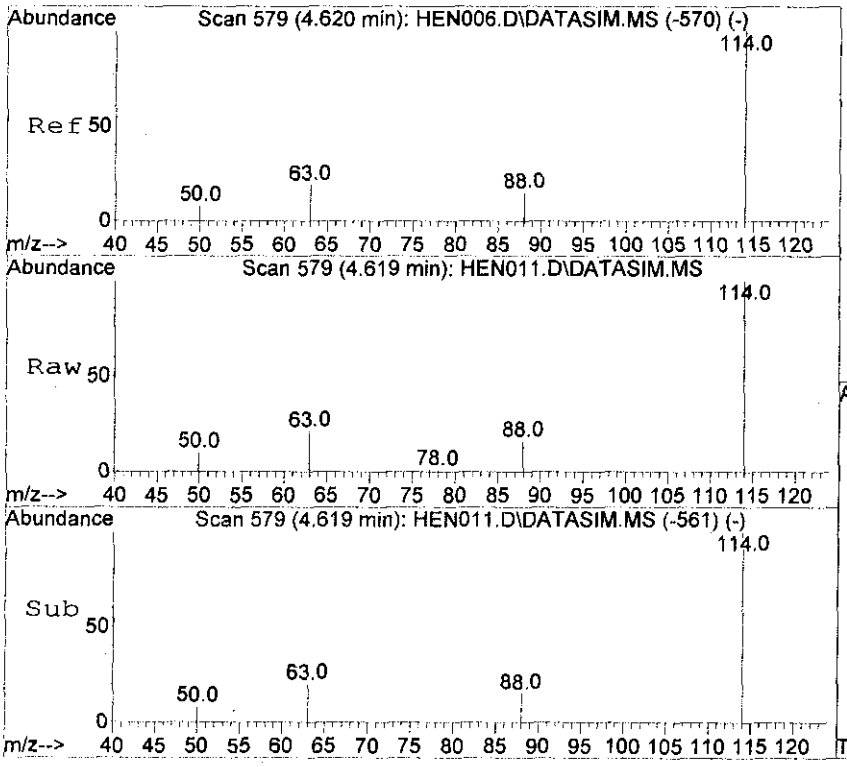


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.005 min
Lab File: HEN011.D
Acq: 16 Mar 2012 15:45

Tgt Ion: 49 Resp: 2504

Ion	Ratio	Lower	Upper
49	100		
130	66.9	46.5	69.7
93	26.1	19.0	28.6
128	51.2	37.8	56.6

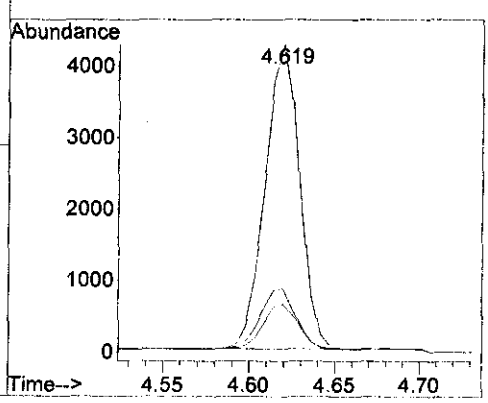


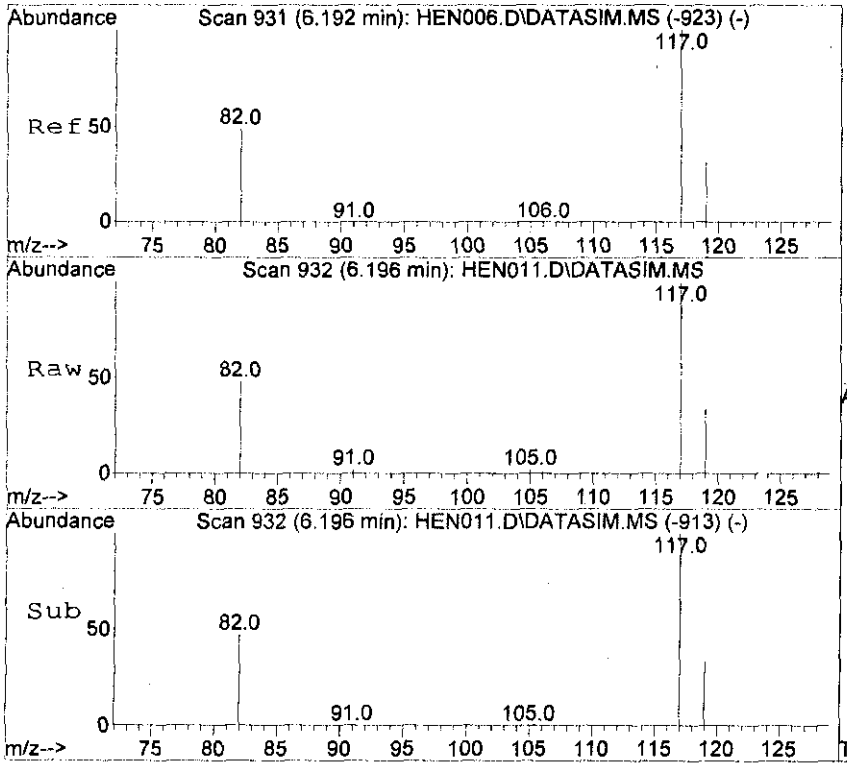


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. -0.000 min
Lab File: HEN011.D
Acq: 16 Mar 2012 15:45

Tgt Ion:114 Resp: 5896

Ion	Ratio	Lower	Upper
114	100		
63	19.9	16.7	25.1
88	14.9	12.2	18.2

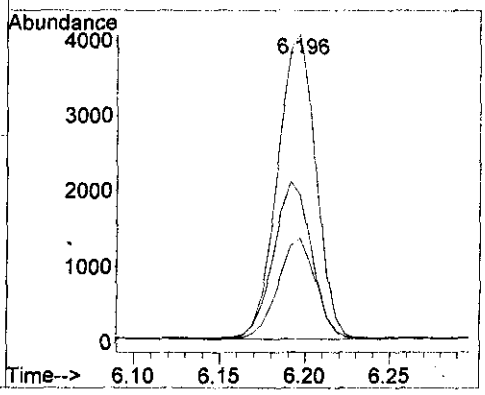




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. 0.004 min
Lab File: HEN011.D
Acq: 16 Mar 2012 15:45

Tgt Ion:117 Resp: 6277

Ion	Ratio	Lower	Upper
117	100		
82	50.3	41.4	62.0
119	32.4	25.8	38.6



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN012.D
Acq On : 16 Mar 2012 15:57
Operator : SJT
Sample : STD20120316-LCS \ 500ppbv LCS
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 16:03:41 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:38:59 2012
QLast Update : Fri Mar 16 15:38:59 2012
Response via : Initial Calibration

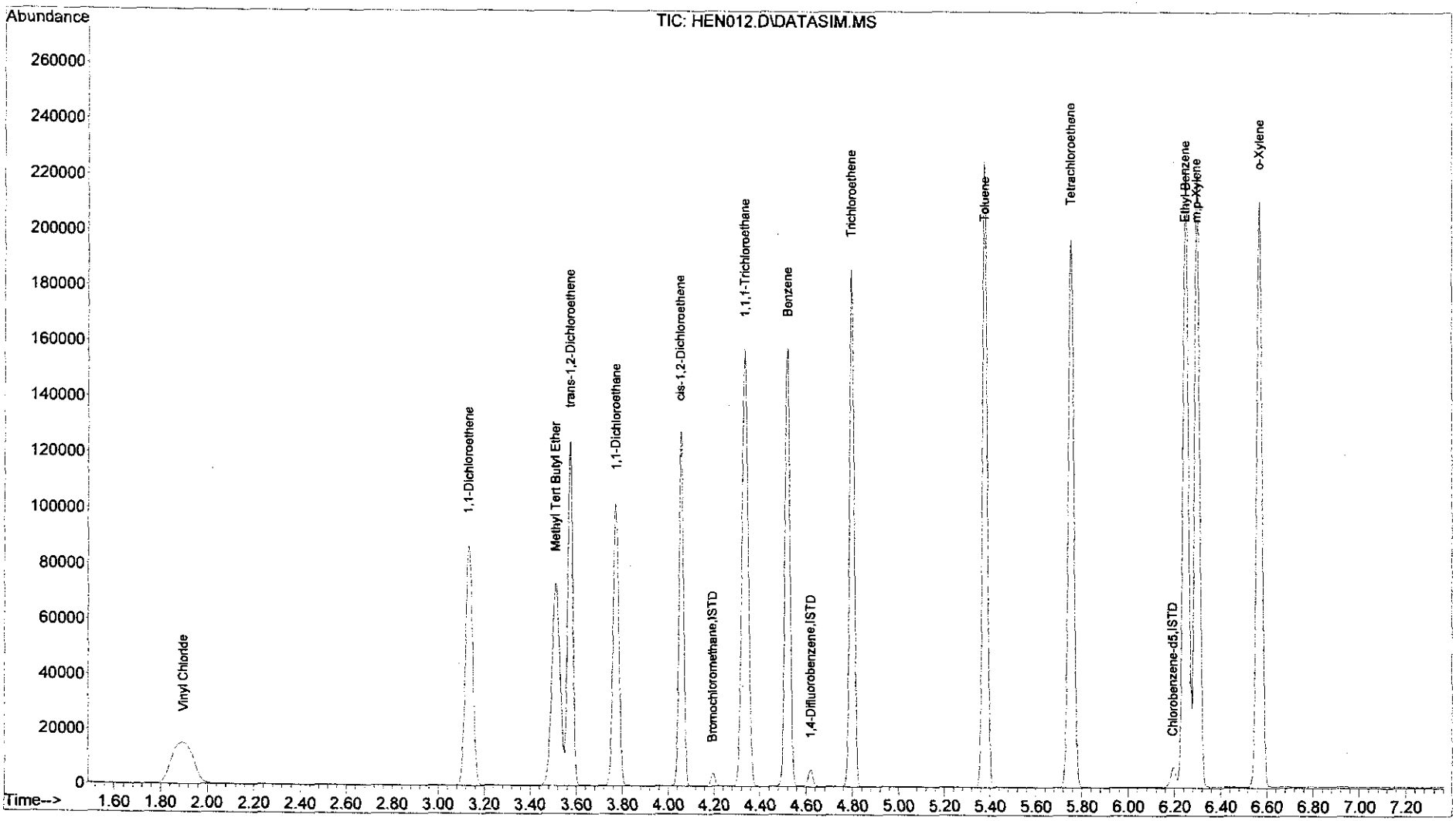
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.192	49	2445	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5807	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.192	117	6060	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Vinyl Chloride	1.896	62	54602	534.86	ppbv	99
3) 1,1-Dichloroethene	3.132	61	105092	570.94	ppbv	100
4) Methyl Tert Butyl Ether	3.510	73	145469	531.58	ppbv	99
5) trans-1,2-Dichloroethene	3.575	61	91015	554.23	ppbv	100
6) 1,1-Dichloroethane	3.772	63	111465	573.89	ppbv	99
7) cis-1,2-Dichloroethene	4.054	61	86124	548.83	ppbv	100
8) 1,1,1-Trichloroethane	4.336	97	142314	543.50	ppbv	100
10) Benzene	4.521	78	162495	550.13	ppbv	100
11) Trichloroethene	4.796	130	85791	548.73	ppbv	99
13) Toluene	5.377	91	205388	550.19	ppbv	100
14) Tetrachloroethene	5.752	166	113737	570.88	ppbv	100
15) Ethyl Benzene	6.246	91	268569	553.14	ppbv	100
16) m,p-Xylene	6.295	91	201849	538.01	ppbv	100
17) o-Xylene	6.568	91	209392	552.61	ppbv	100

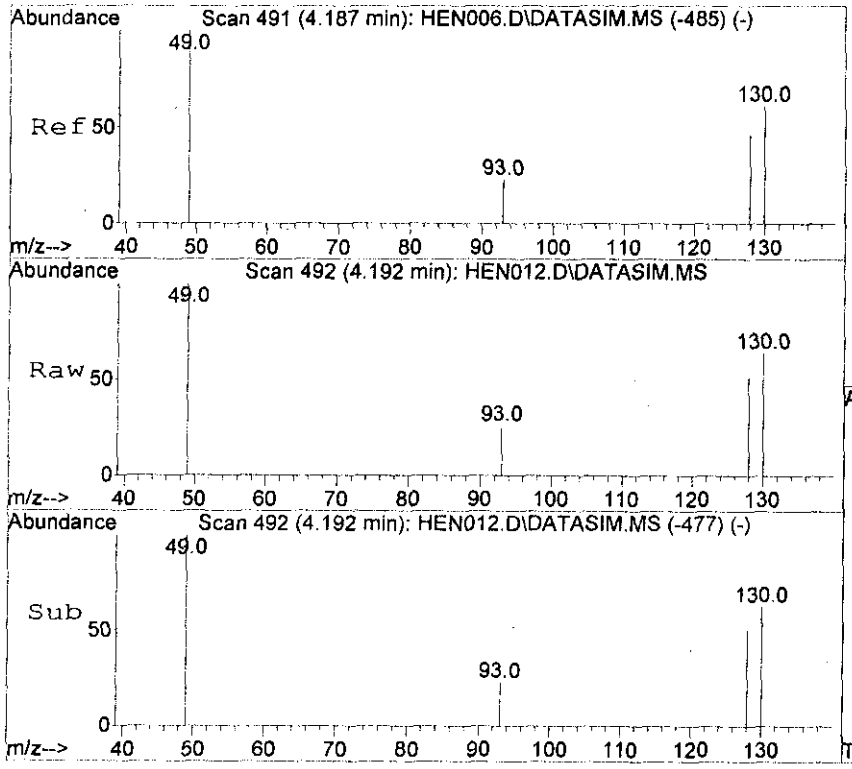
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120316\
Data File : HEN012.D
Acq On : 16 Mar 2012 15:57
Operator : SJT
Sample : STD20120316-LCS \ 500ppbv LCS
Misc : 5mL \ 16 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 16 16:03:41 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:38:59 2012
QLast Update : Fri Mar 16 15:38:59 2012
Response via : Initial Calibration

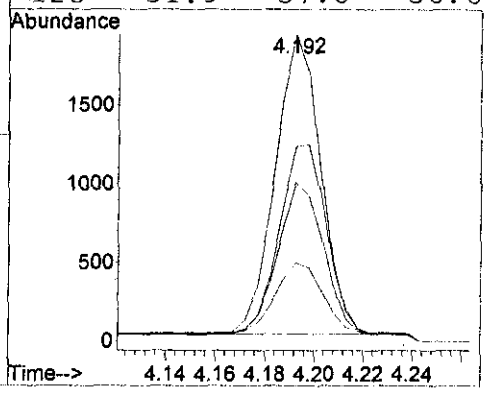


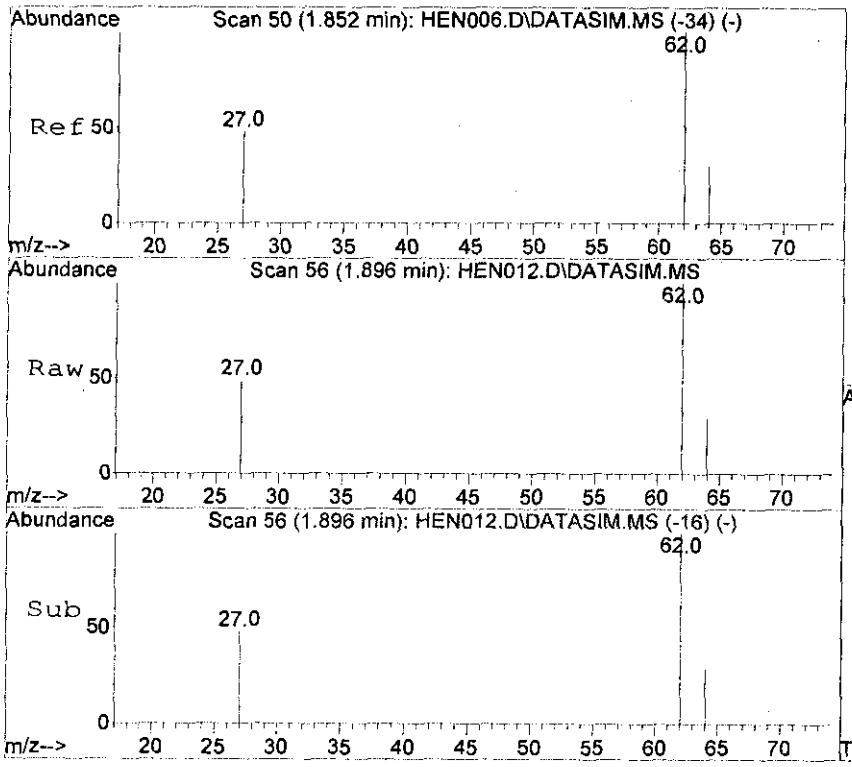


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.005 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 49 Resp: 2445

Ion	Ratio	Lower	Upper
49	100		
130	63.6	46.5	69.7
93	25.6	19.0	28.6
128	51.9	37.8	56.6

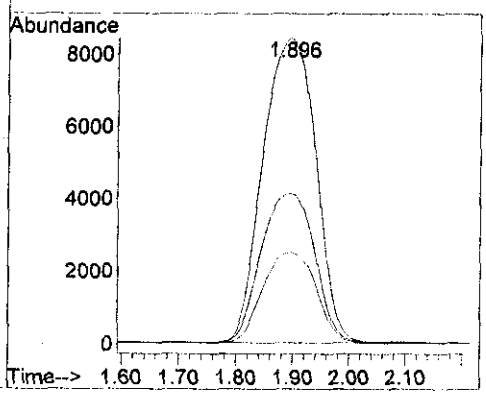


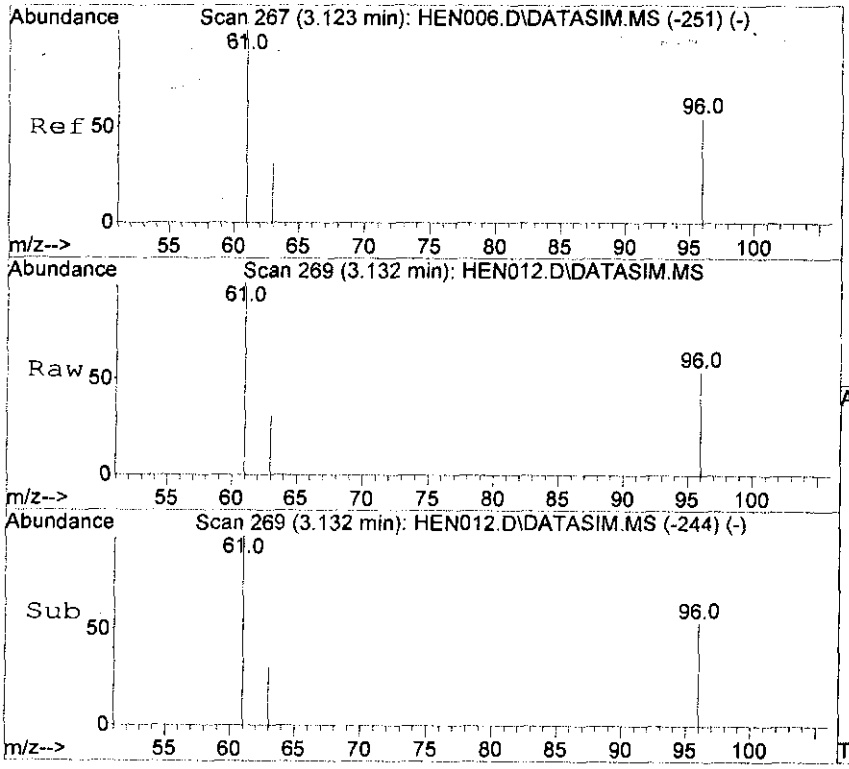


#2
Vinyl Chloride
Concen: 534.86 ppbv
RT: 1.896 min Scan# 56
Delta R.T. 0.044 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 62 Resp: 54602

Ion	Ratio	Lower	Upper
62	100		
64	29.7	23.7	35.5
27	49.0	39.8	59.8

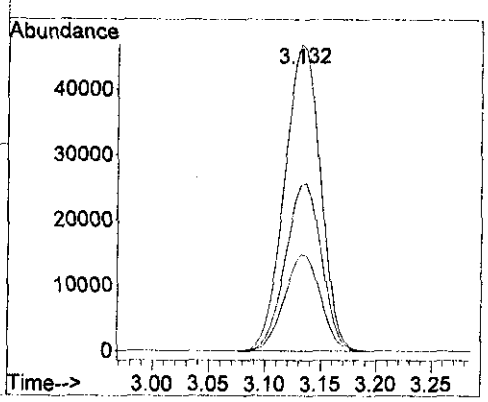


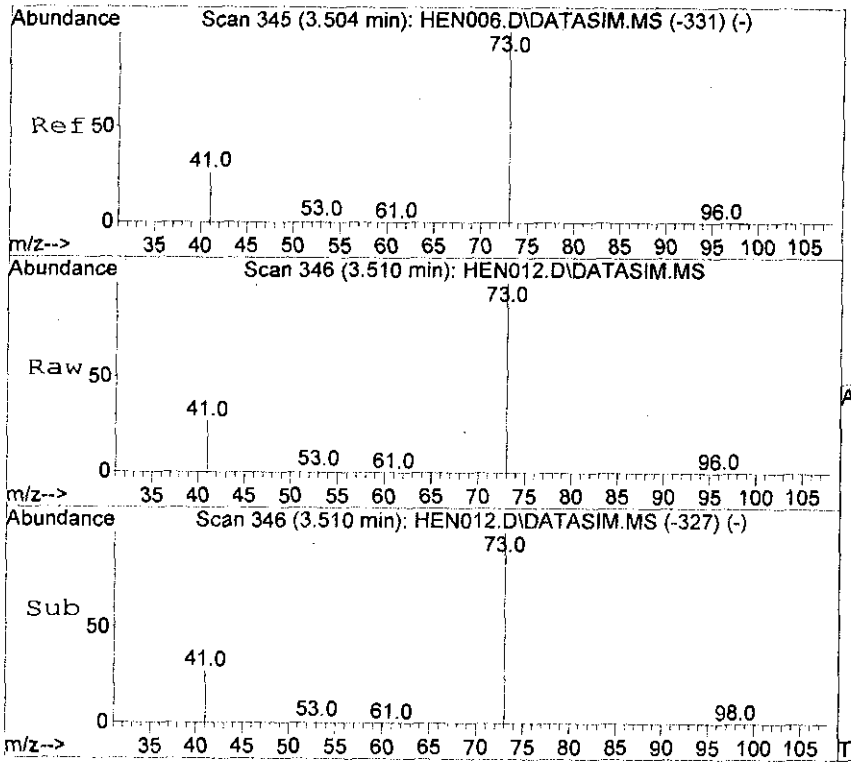


#3
1,1-Dichloroethene
Concen: 570.94 ppbv
RT: 3.132 min Scan# 269
Delta R.T. 0.009 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 61 Resp: 105092

Ion	Ratio	Lower	Upper
61	100		
96	54.6	43.8	65.6
63	31.3	25.1	37.7

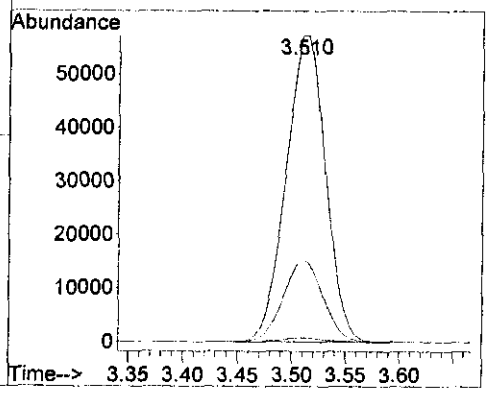


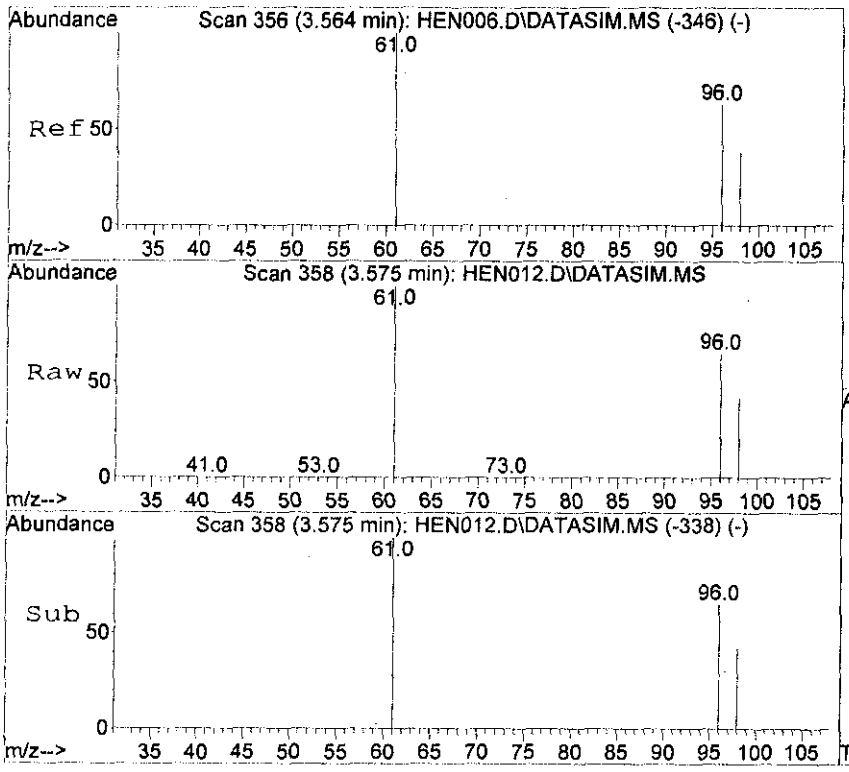


#4
Methyl Tert Butyl Ether
Concen: 531.58 ppbv
RT: 3.510 min Scan# 346
Delta R.T. 0.005 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 73 Resp: 145469

Ion	Ratio	Lower	Upper
73	100		
53	1.4	1.1	1.7
41	26.7	21.8	32.6

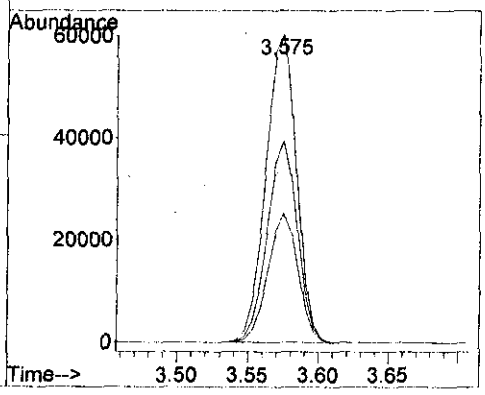


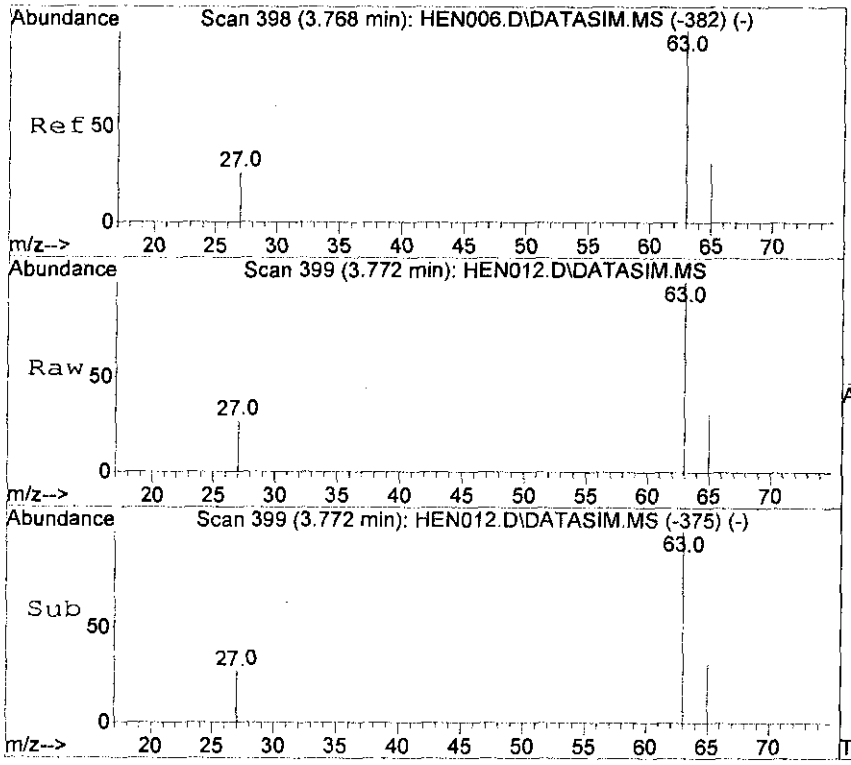


#5
trans-1,2-Dichloroethene
Concen: 554.23 ppbv
RT: 3.575 min Scan# 358
Delta R.T. 0.011 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 61 Resp: 91015

Ion	Ratio	Lower	Upper
61	100		
96	64.5	51.3	76.9
98	41.2	32.7	49.1

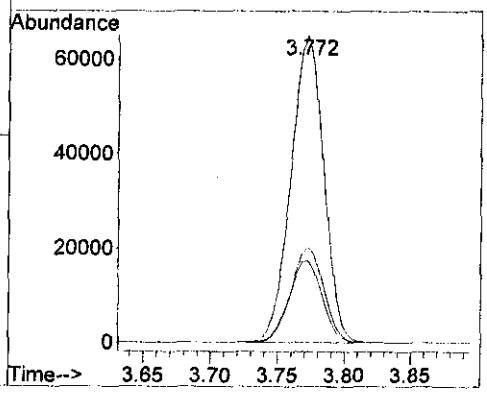


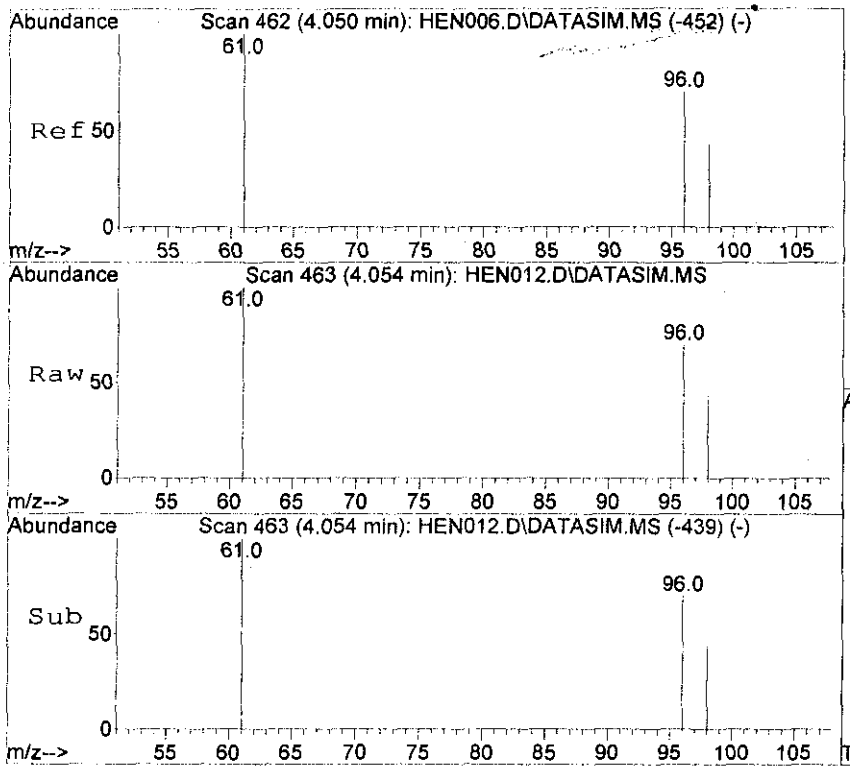


#6
1,1-Dichloroethane
Concen: 573.89 ppbv
RT: 3.772 min Scan# 399
Delta R.T. 0.004 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 63 Resp: 111465

Ion	Ratio	Lower	Upper
63	100		
65	30.9	24.7	37.1
27	27.0	22.0	33.0

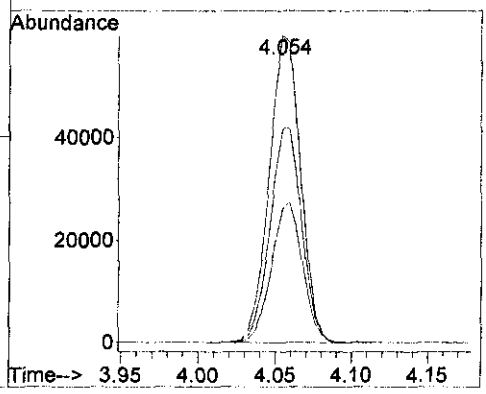


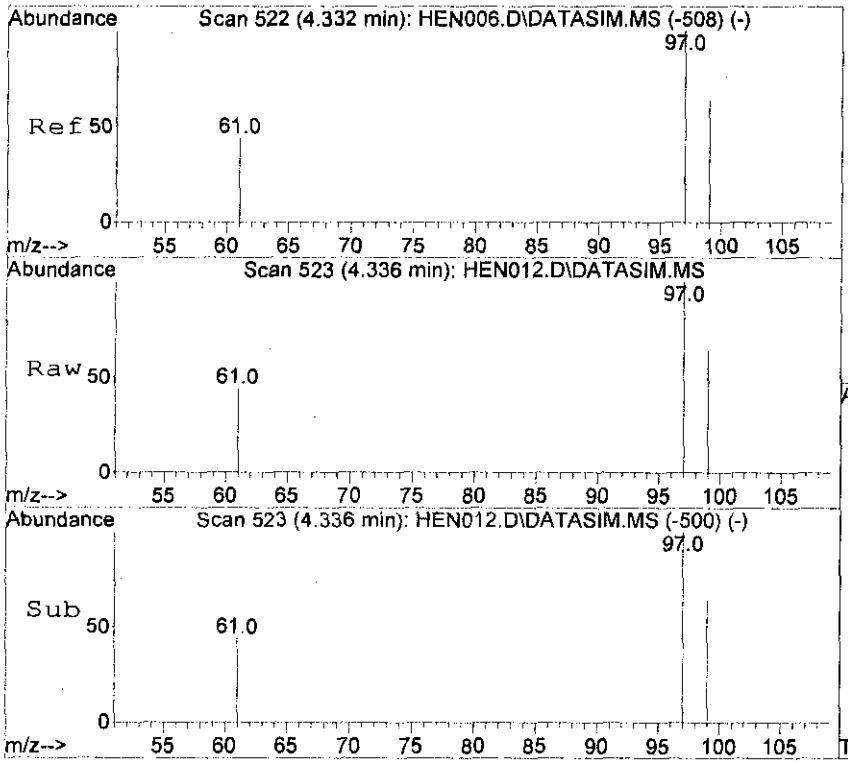


#7
cis-1,2-Dichloroethene
Concen: 548.83 ppbv
RT: 4.054 min Scan# 463
Delta R.T. 0.004 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 61 Resp: 86124

Ion	Ratio	Lower	Upper
61	100		
96	70.6	56.2	84.4
98	45.4	36.0	54.0

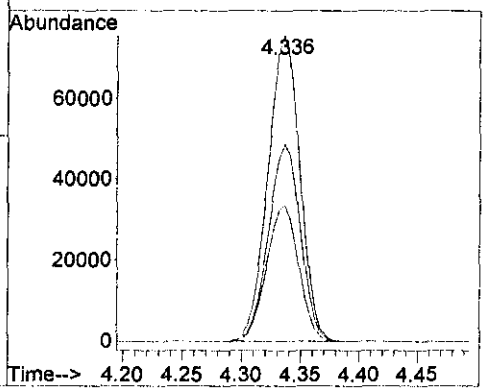


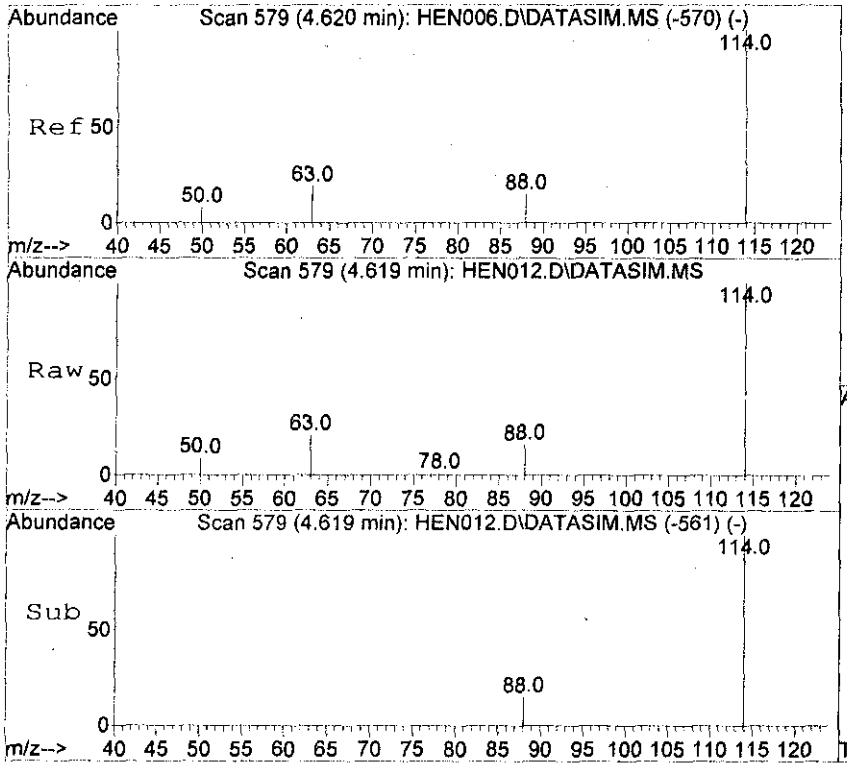


#8
1,1,1-Trichloroethane
Concen: 543.50 ppbv
RT: 4.336 min Scan# 523
Delta R.T. 0.004 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 97 Resp: 142314

Ion	Ratio	Lower	Upper
97	100		
99	64.4	51.5	77.3
61	44.6	35.8	53.8

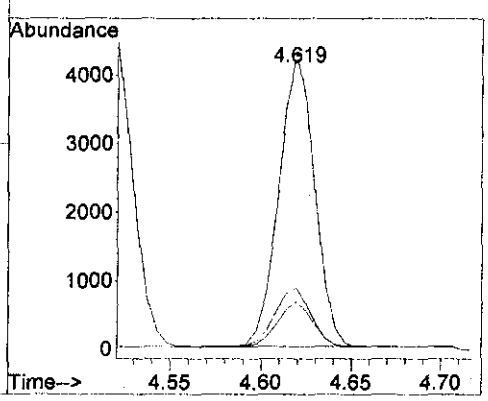


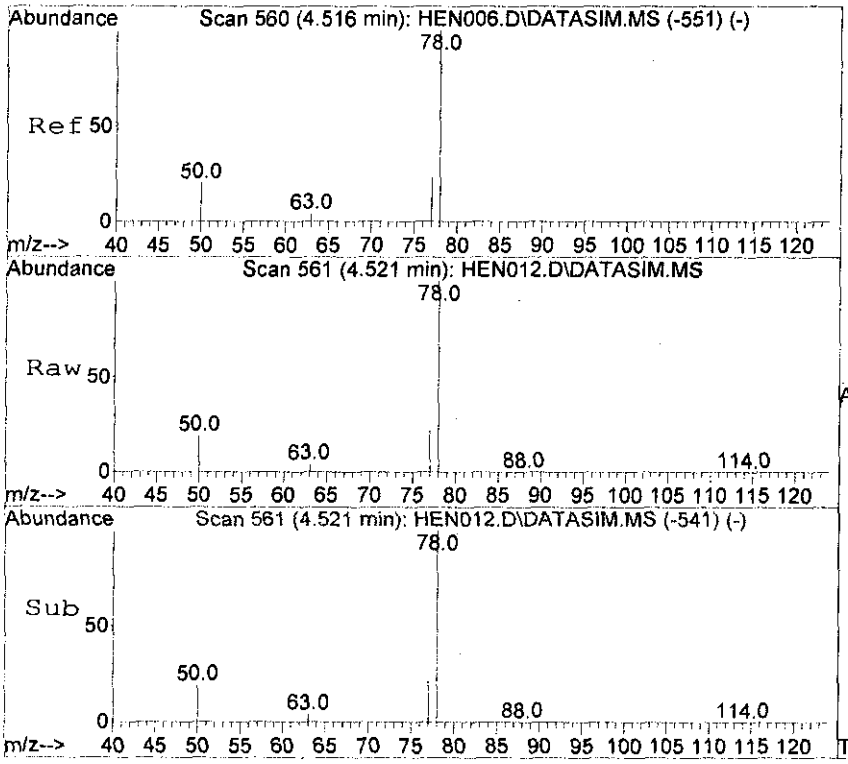


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. -0.000 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion:114 Resp: 5807

Ion	Ratio	Lower	Upper
114	100		
63	20.3	16.7	25.1
88	15.1	12.2	18.2

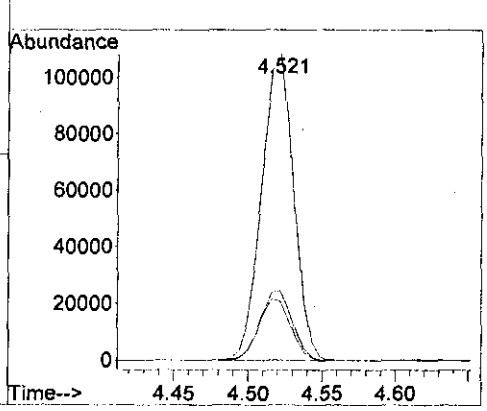


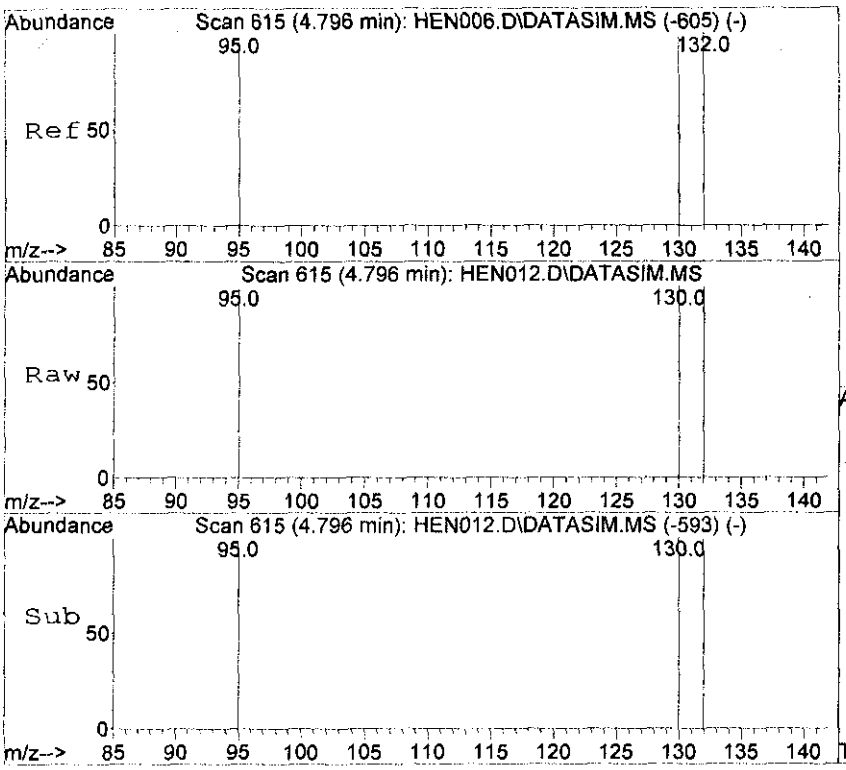


#10
Benzene
Concen: 550.13 ppbv
RT: 4.521 min Scan# 561
Delta R.T. 0.005 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 78 Resp: 162495

Ion	Ratio	Lower	Upper
78	100		
77	22.9	18.2	27.4
50	20.1	15.9	23.9

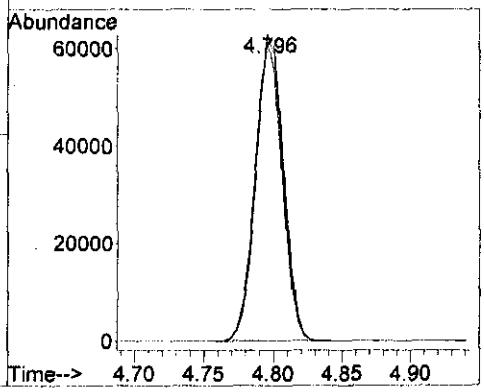


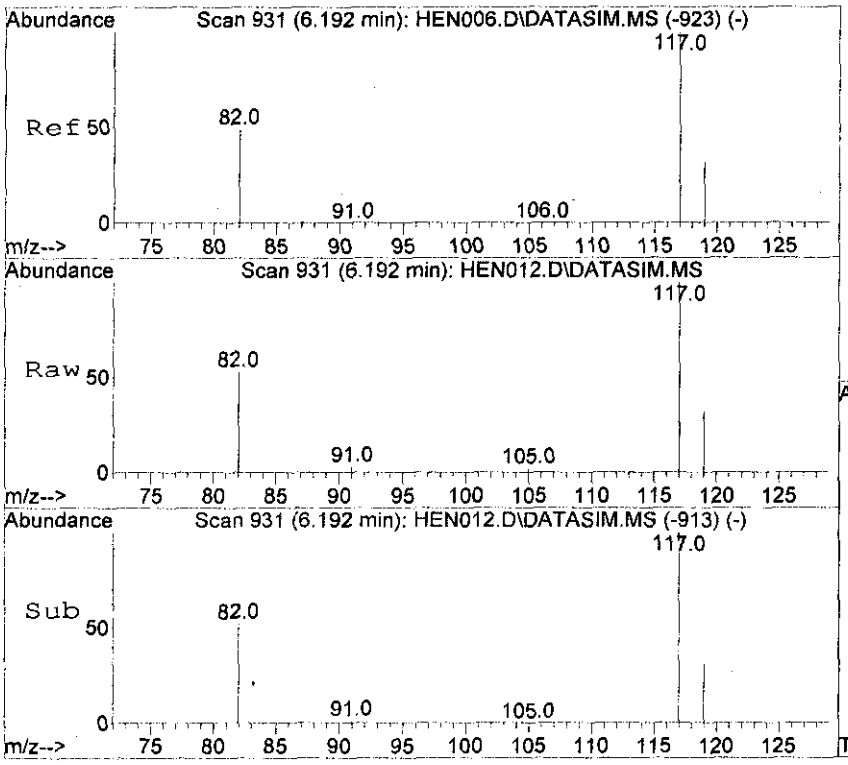


#11
Trichloroethene
Concen: 548.73 ppbv
RT: 4.796 min Scan# 615
Delta R.T. -0.000 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion:130 Resp: 85791

Ion	Ratio	Lower	Upper
130	100		
132	100.7	80.4	120.6
95	97.0	78.6	118.0

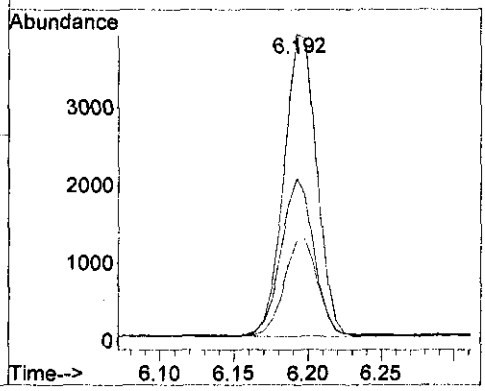


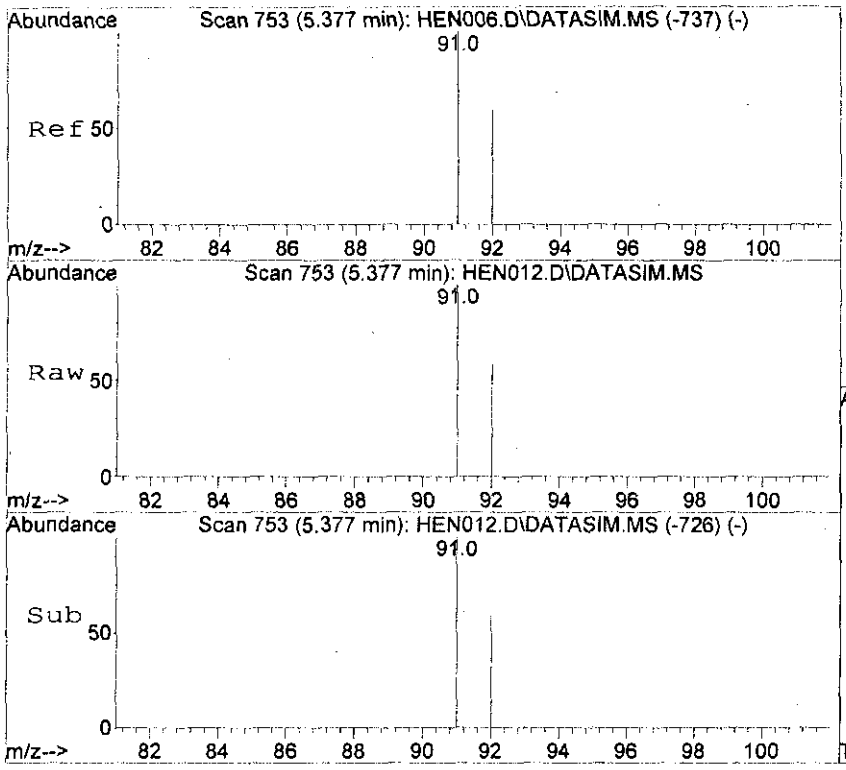


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.192 min Scan# 931
Delta R.T. -0.000 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion:117 Resp: 6060

Ion	Ratio	Lower	Upper
117	100		
82	50.9	41.4	62.0
119	33.0	25.8	38.6

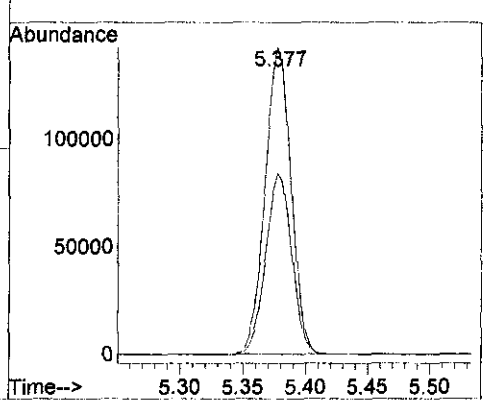


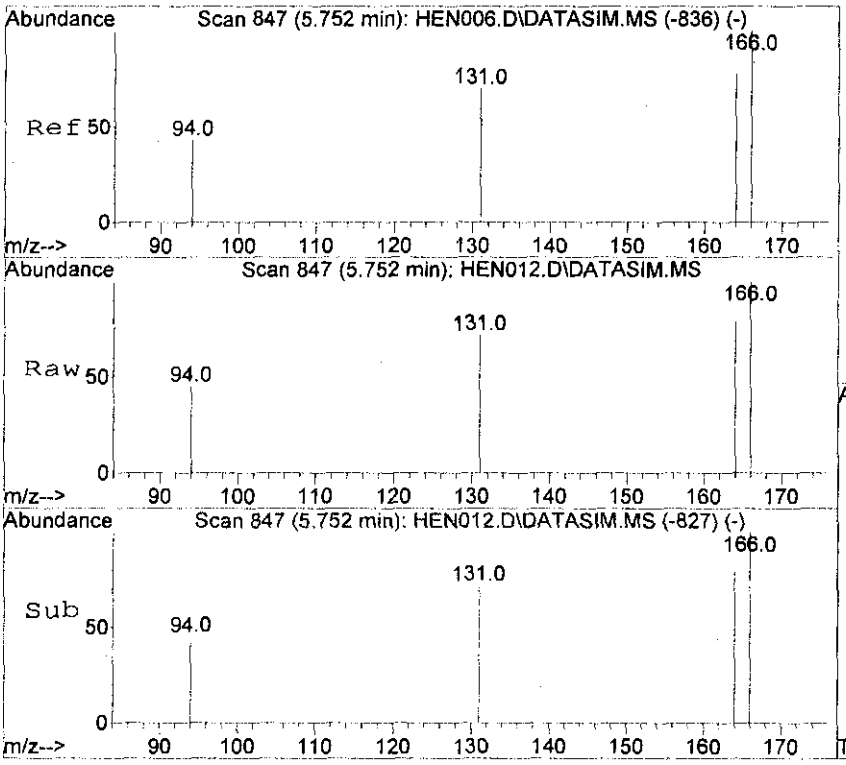


#13
Toluene
Concen: 550.19 ppbv
RT: 5.377 min Scan# 753
Delta R.T. -0.000 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 91 Resp: 205388

Ion	Ratio	Lower	Upper
91	100		
92	59.3	47.4	71.2

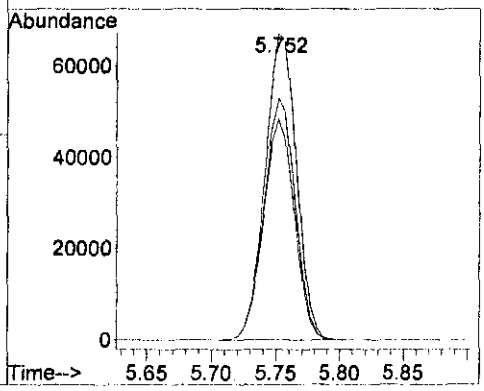


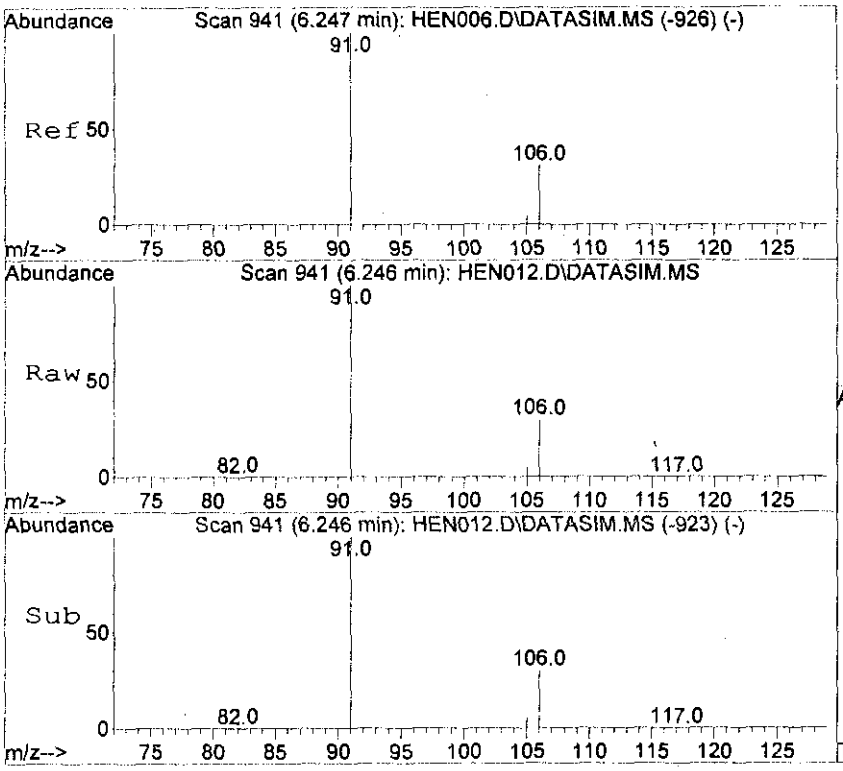


#14
Tetrachloroethene
Concen: 570.88 ppbv
RT: 5.752 min Scan# 847
Delta R.T. -0.000 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion:166 Resp: 113737

Ion	Ratio	Lower	Upper
166	100		
164	78.3	62.5	93.7
131	71.3	57.0	85.4

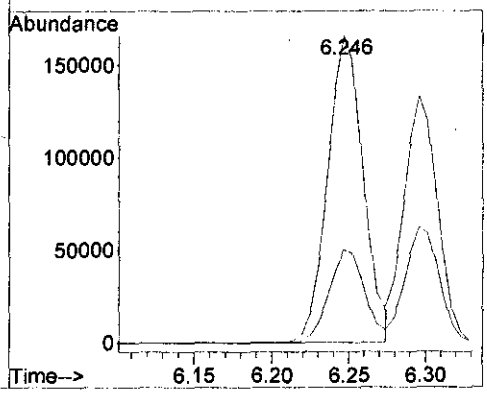


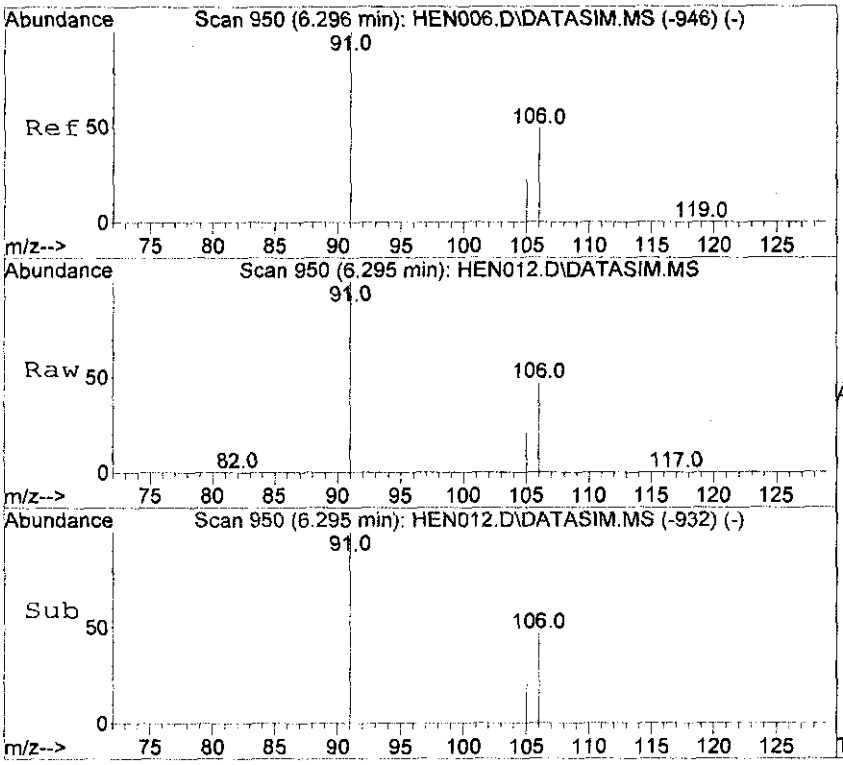


#15
Ethyl Benzene
Concen: 553.14 ppbv
RT: 6.246 min Scan# 941
Delta R.T. -0.000 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 91 Resp: 268569

Ion	Ratio	Lower	Upper
91	100		
106	30.1	23.9	35.9

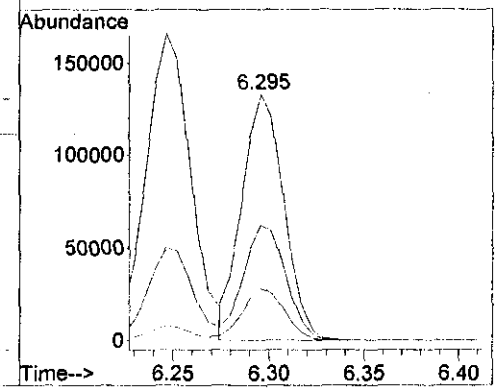


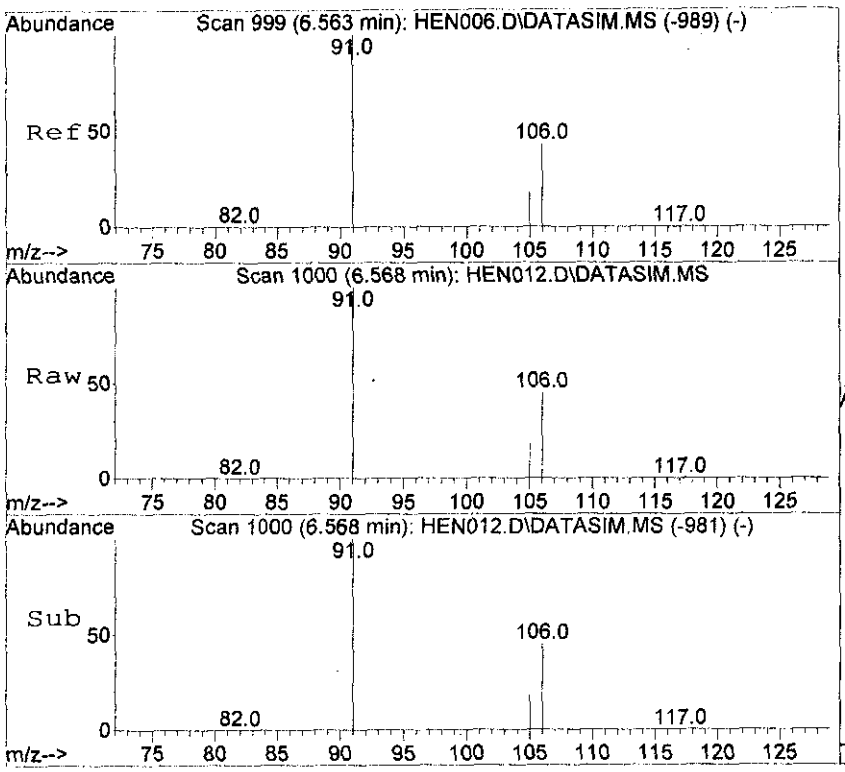


#16
m,p-Xylene
Concen: 538.01 ppbv
RT: 6.295 min Scan# 950
Delta R.T. -0.000 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 91 Resp: 201849

Ion	Ratio	Lower	Upper
91	100		
106	46.9	37.3	55.9
105	21.2	16.7	25.1

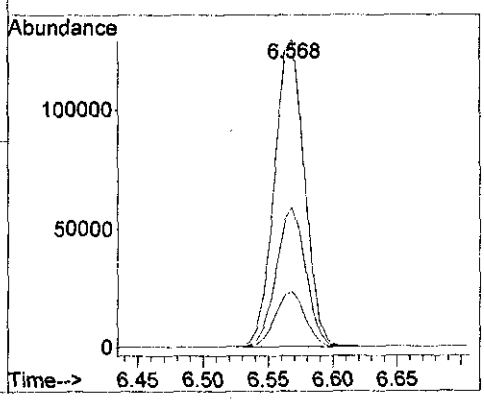




#17
o-Xylene
Concen: 552.61 ppbv
RT: 6.568 min Scan# 1000
Delta R.T. 0.005 min
Lab File: HEN012.D
Acq: 16 Mar 2012 15:57

Tgt Ion: 91 Resp: 209392

Ion	Ratio	Lower	Upper
91	100		
106	44.7	35.8	53.8
105	17.9	14.2	21.4



GC/MS QA-QC Check Report

Tune File : D:\msdchem\1\data\2012\20120316\HEN003.D
Tune Time : 16 Mar 2012 13:46

Daily Calibration File : D:\msdchem\1\data\2012\20120316\HEN006.D

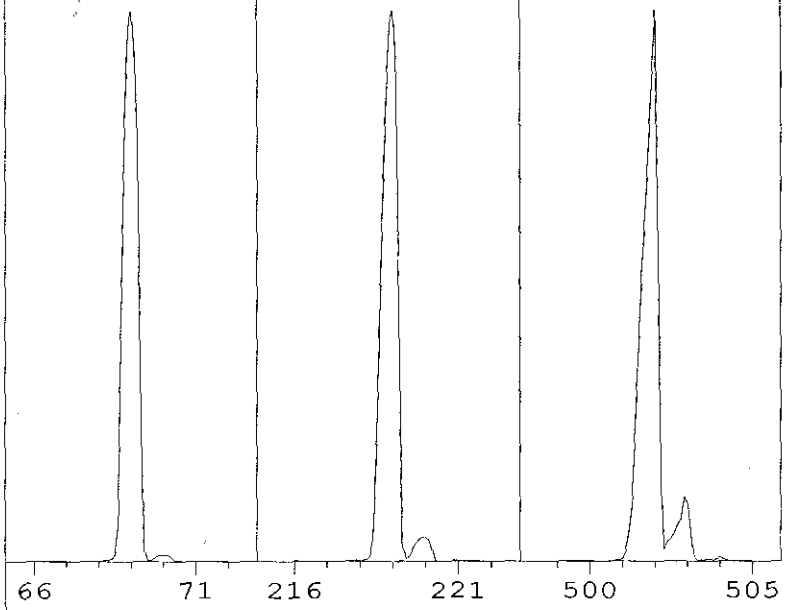
File	Sample	Internal Standard Responses		
		2549	6006	6292
HEN004.D	STD2012031	2348	5532	5811
HEN005.D	STD2012031	2373	5684	5973
HEN006.D	STD2012031	2549	6006	6292
HEN007.D	STD2012031	2413	5717	5979
HEN008.D	STD2012031	2500	5900	6184
HEN009.D	STD2012031	2452	5806	6139
HEN010.D	STD2012031	2505	5967	6246
HEN011.D	STD2012031	2504	5896	6277
HEN012.D	STD2012031	2445	5807	6060

(fails) - fails 24hr time check * - fails criteria

Created: Fri Mar 16 16:04:57 2012 Instrument 2

Wed Mar 21 06:11:05 2012 Instrument: Instrument 2
C:\msdchem\1\5975\bfb.u US83130668

Mass	69.00	Mass	219.00	Mass	502.00
Ab	814630	Ab	531460	Ab	35848
Pw50	0.54	Pw50	0.55	Pw50	0.54

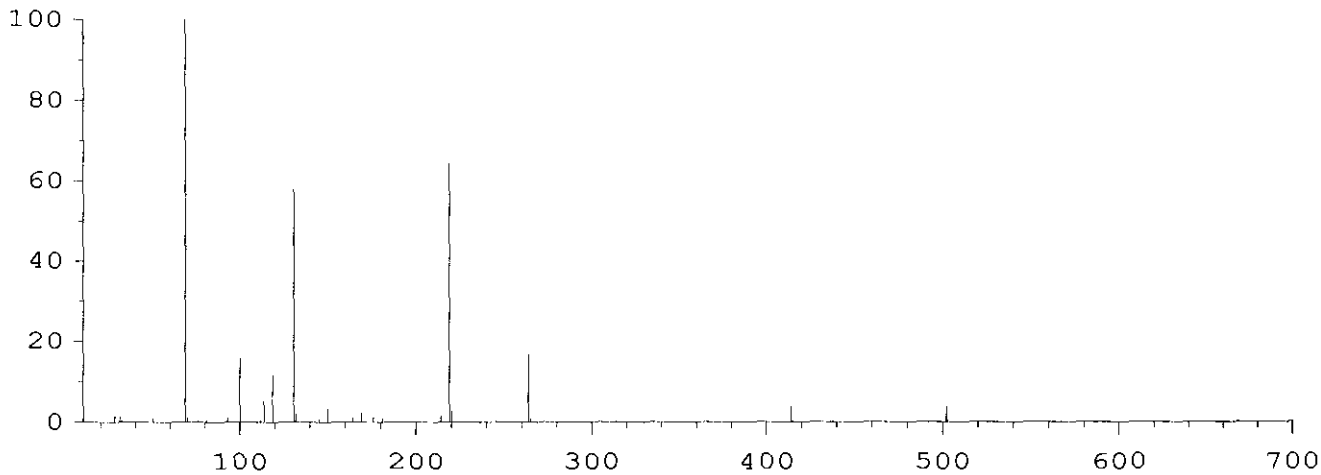


Ion Pol	Pos	MassGain	-978
		MassOffs	-39
Emission	34.6	AmuGain	1152
EIEnrgy	69.9	AmuOffs	126.25
Filament	2	Wid219	-0.016
		DC Pol	Pos
Repeller	19.90		
IonFcus	71.2	HEDEnab	On
EntLens	0.0	EMVolts	1353
EntOffs	Var		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.64e05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
111 peaks Base: 69.00 Abundance: 780800



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	780800	100.00	70.00	8152	1.04
219.00	500800	64.14	220.00	21336	4.26
502.00	29920	3.83	503.00	3324	11.11

Air/Water Check: H2O~0.16% N2~1.55% O2~0.46% CO2~0.11% N2/H2O~947.42%

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 502; EM Gain 163349
Repeller Maximum 20 volts using ion 219; Gain Factor 1.63

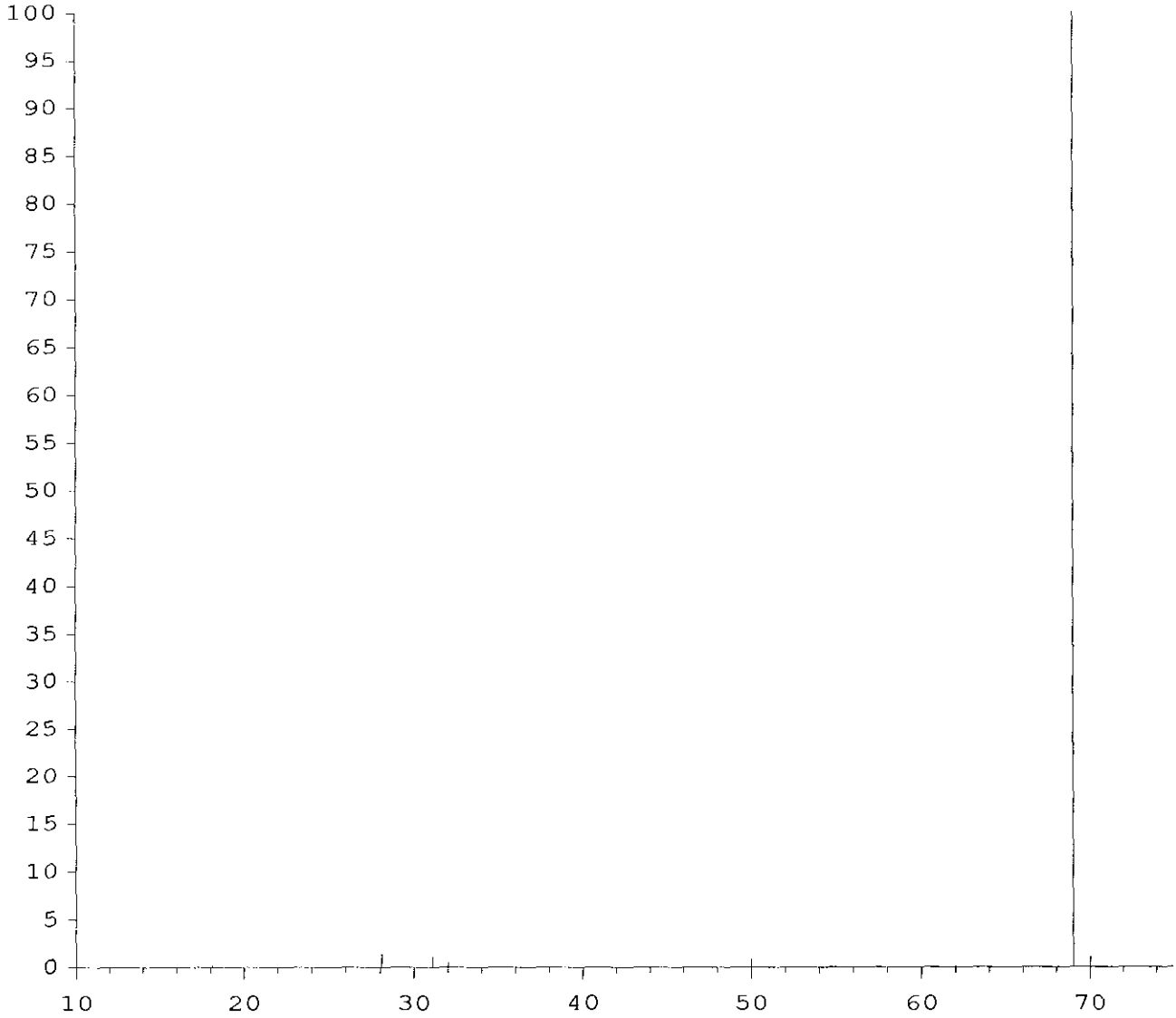
MassGain Values(Samples): -965(3) -953(2) -927(1) -873(0) -795(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	126.3	126.3	126.3	126.3	126.3	126.3	126.3
Entrance Lens Offset:	15.3	12.5	13.3	13.6	14.8	16.1	16.1
Target Abund(%):	1.0	100.0	52.0	50.0	2.4	2.0	
Actual Tune Abund(%):	0.9	100.0	57.8	64.1	3.9	3.8	

597x Air and Water Check

Instrument: Instrument 2
Wed Mar 21 06:11:56 2012 C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
67 peaks Base: 69.00 Abundance: 792064



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	792064	100.00	70.00	8269	1.04
18.10	1553	0.20	19.10	158	10.17
28.10	11614	1.47	29.00	170	1.46

Current Params used: bfb.u

Relative abundances:

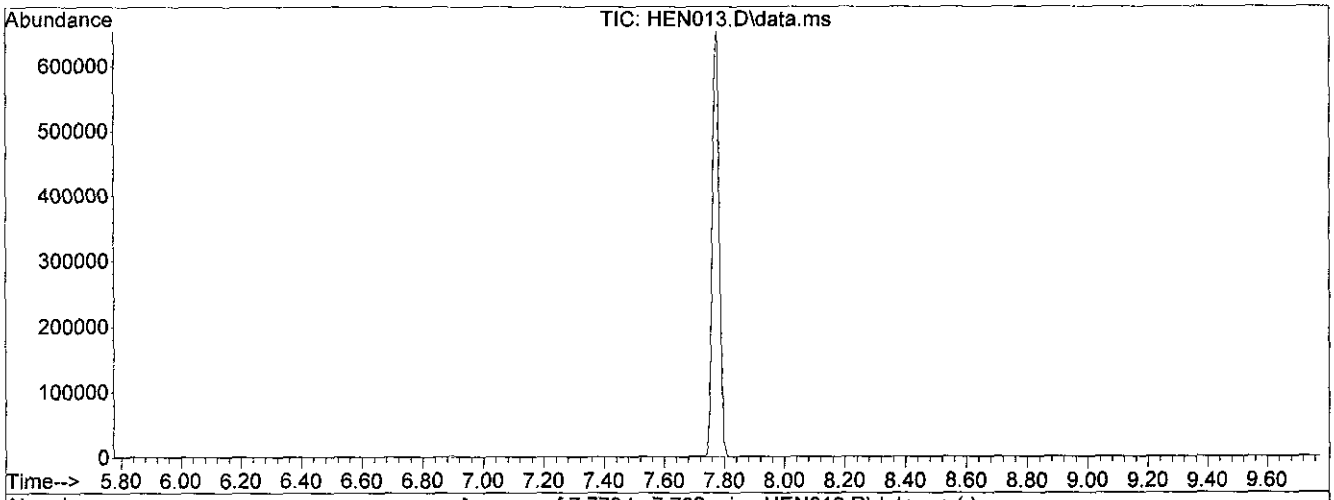
18/69 =	0.20	Water%	(counts=1553)
28/69 =	1.47	Nitrogen%	(counts=11614)
32/69 =	0.48	Oxygen%	(counts=3817)
44/69 =	0.11	Carbon Dioxide%	(counts=866)
28/18 =	747.84	Nitrogen/Water%	

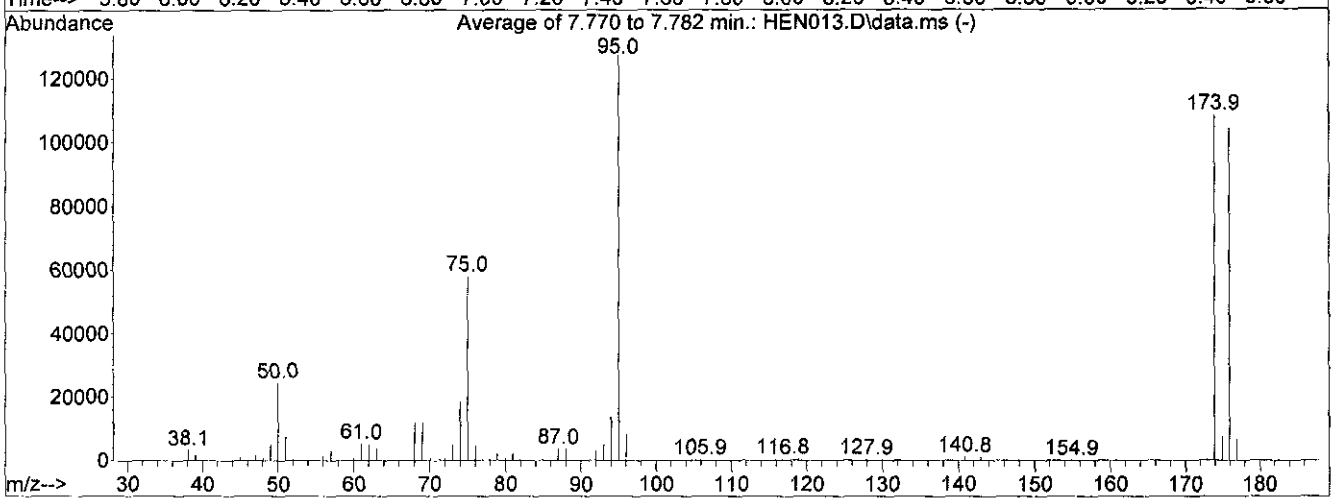
BFB

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN013.D
Acq On : 21 Mar 2012 6:19
Operator : SJT
Sample : BFB \ 1ppmv STD
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:38
Last Update : Fri Mar 16 15:38:57 2012





AutoFind: Scans 652, 653, 654; Background Corrected with Scan 644

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.3	24547	PASS
75	95	30	66	45.6	58133	PASS
95	95	100	100	100.0	127459	PASS
96	95	5	9	6.4	8170	PASS
173	174	0.00	2	0.6	636	PASS
174	95	50	120	85.1	108421	PASS
175	174	4	9	7.1	7688	PASS
176	174	93	101	96.1	104216	PASS
177	176	5	9	6.6	6831	PASS

Continuing Calibration Report Instrument 2

Method Path : C:\msdchem\1\METHODS\
Method File : LOOP20120316-Quant.m
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:38:59 2012
Last Update : Wed Mar 21 06:40:15 2012
Response Via : Initial Calibration

CC Data File: HEN014.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%
1	ISTD	Bromochloromethane	1.000	1.000	0.0	98
2		Vinyl Chloride	0.418	0.450	-7.9	112
3		1,1-Dichloroethene	0.753	0.843	-12.0	111
4		Methyl Tert Butyl Ether	1.119	1.239	-10.7	111
5		trans-1,2-Dichloroethene	0.672	0.744	-10.7	111
6		1,1-Dichloroethane	0.794	0.888	-11.8	110
7		cis-1,2-Dichloroethene	0.642	0.711	-10.9	112
8		1,1,1-Trichloroethane	1.071	1.207	-12.7	111
9	ISTD	1,4-Difluorobenzene	1.000	1.000	0.0	99
10		Benzene	0.509	0.550	-8.0	111
11		Trichloroethene	0.269	0.303	-12.4	112
12	ISTD	Chlorobenzene-d5	1.000	1.000	0.0	97
13		Toluene	0.616	0.690	-12.0	113
14		Tetrachloroethene	0.329	0.386	-17.3	113
15		Ethyl Benzene	0.801	0.921	-15.0	114
16		m,p-Xylene	0.619	0.707	-14.2	119
17		o-Xylene	0.625	0.727	-16.3	118

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN014.D
Acq On : 21 Mar 2012 6:33
Operator : SJT
Sample : STD20120321-1 \ 500ppbv CCV
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 06:39:36 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:38:59 2012
QLast Update : Fri Mar 16 15:38:59 2012
Response via : Initial Calibration

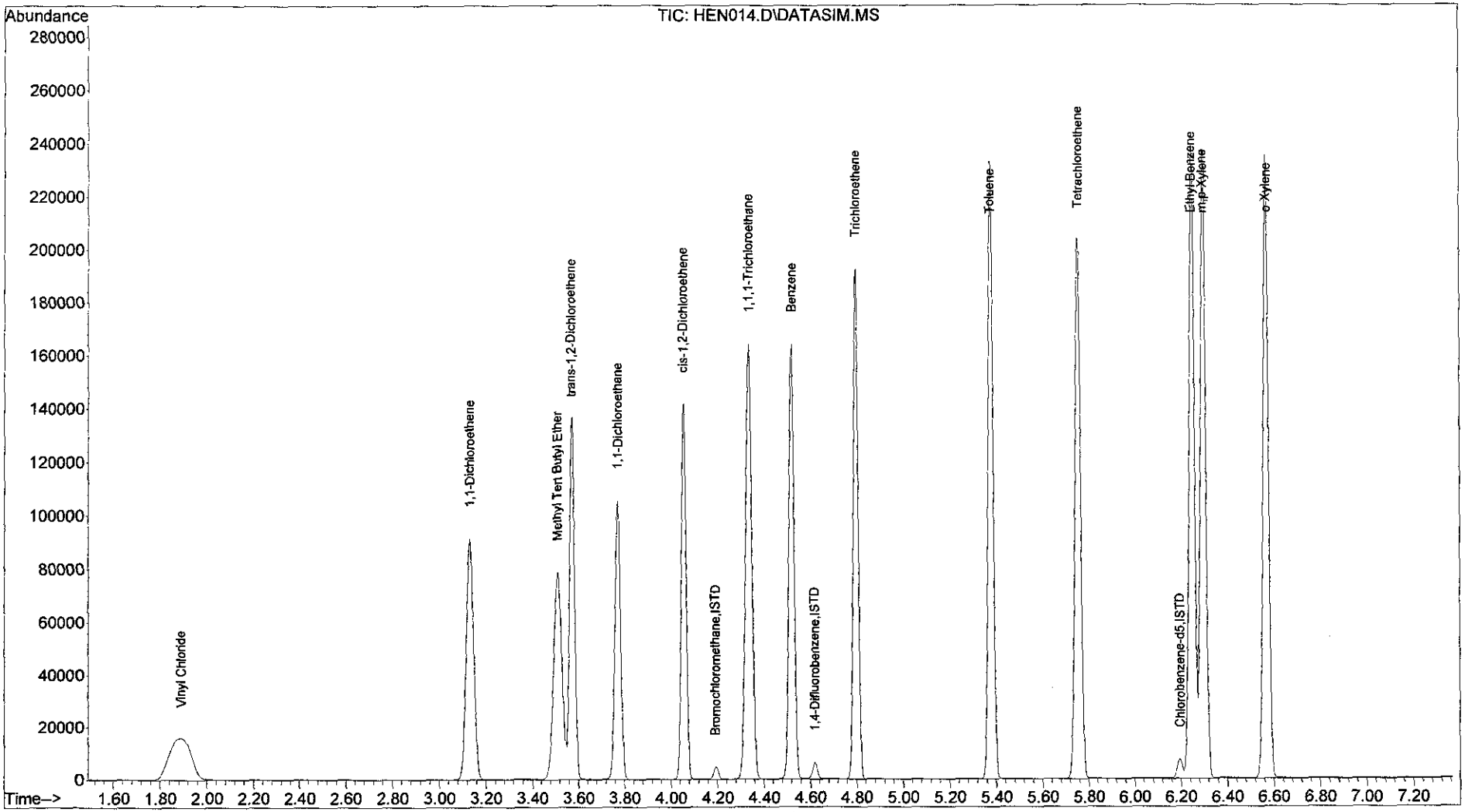
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.192	49	2488	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5934	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	6081	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Vinyl Chloride	1.889	62	57442	552.95	ppbv	99
3) 1,1-Dichloroethene	3.132	61	109121	582.58	ppbv	100
4) Methyl Tert Butyl Ether	3.510	73	155715	559.18	ppbv	98
5) trans-1,2-Dichloroethene	3.570	61	99916	597.91	ppbv	99
6) 1,1-Dichloroethane	3.772	63	114883	581.26	ppbv	99
7) cis-1,2-Dichloroethene	4.054	61	94705	593.08	ppbv	99
8) 1,1,1-Trichloroethane	4.336	97	147843	554.86	ppbv	99
10) Benzene	4.521	78	168748	559.08	ppbv	100
11) Trichloroethene	4.799	130	90669	567.51	ppbv	99
13) Toluene	5.376	91	215049	574.08	ppbv	100
14) Tetrachloroethene	5.756	166	119012	595.30	ppbv	100
15) Ethyl Benzene	6.245	91	287129	589.33	ppbv	99
16) m,p-Xylene	6.294	91	221472	588.27	ppbv	100
17) o-Xylene	6.567	91	227647	598.71	ppbv	100

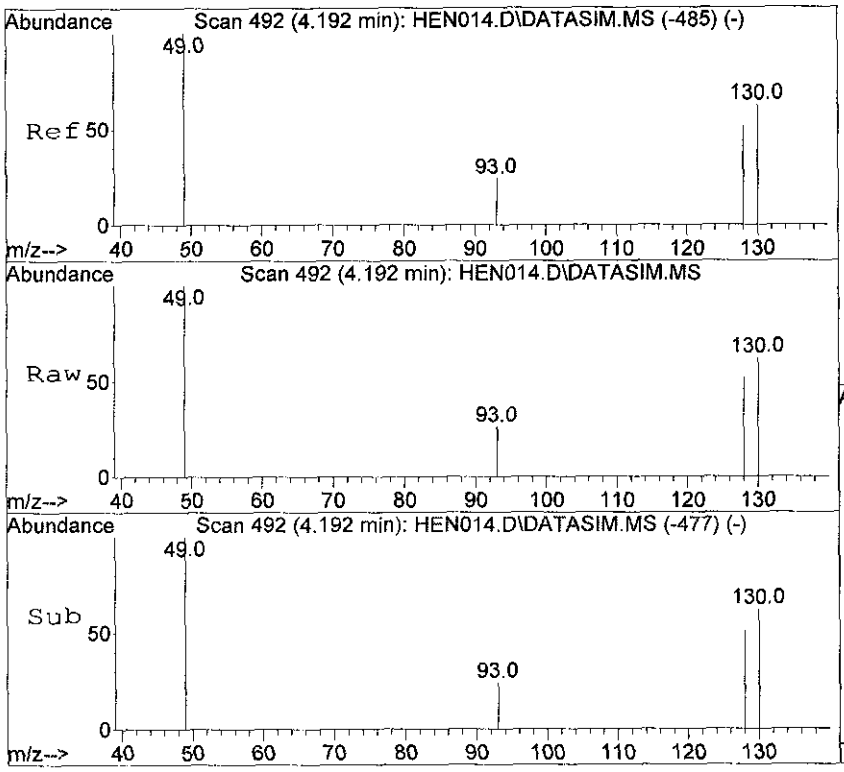
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN014.D
Acq On : 21 Mar 2012 6:33
Operator : SJT
Sample : STD20120321-1 \ 500ppbv CCV
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 06:39:36 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:38:59 2012
QLast Update : Fri Mar 16 15:38:59 2012
Response via : Initial Calibration

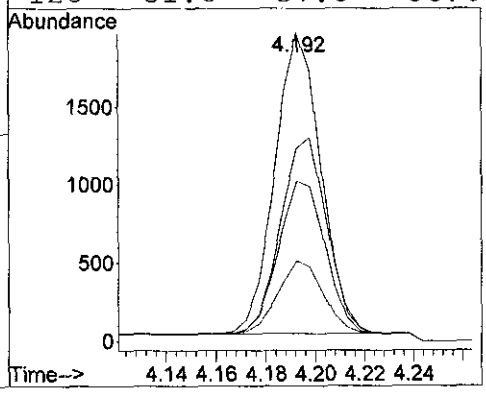


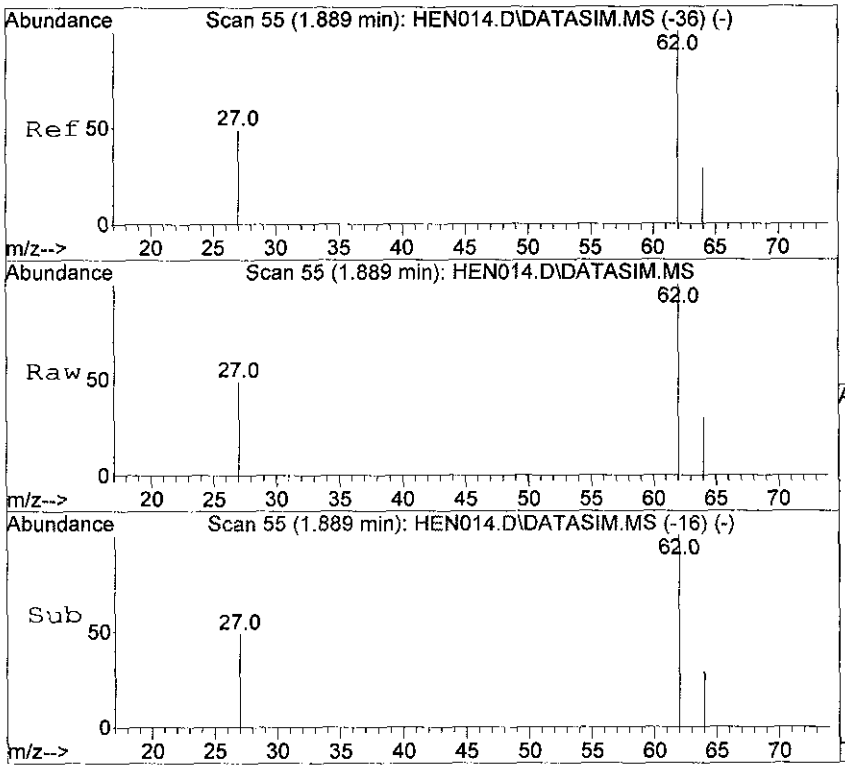


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.005 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 49 Resp: 2488

Ion	Ratio	Lower	Upper
49	100		
130	62.3	46.5	69.7
93	25.9	19.0	28.6
128	51.8	37.8	56.6

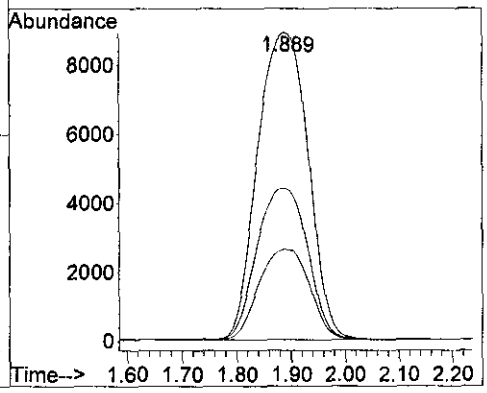


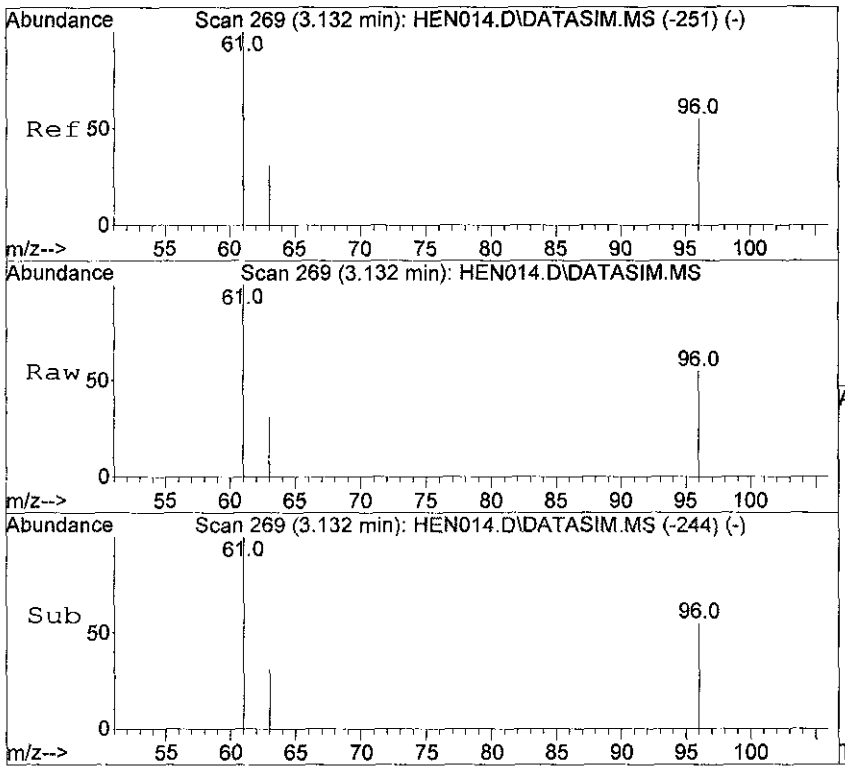


#2
Vinyl Chloride
Concen: 552.95 ppbv
RT: 1.889 min Scan# 55
Delta R.T. 0.037 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 62 Resp: 57442

Ion	Ratio	Lower	Upper
62	100		
64	29.5	23.7	35.5
27	49.3	39.8	59.8

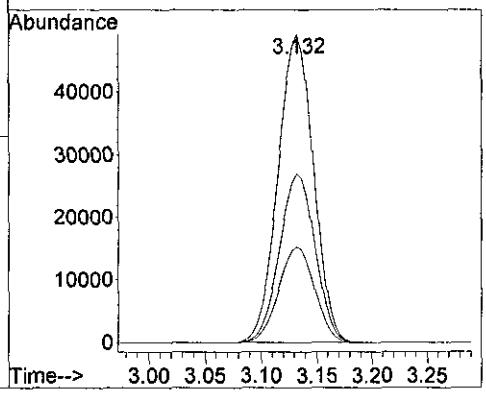


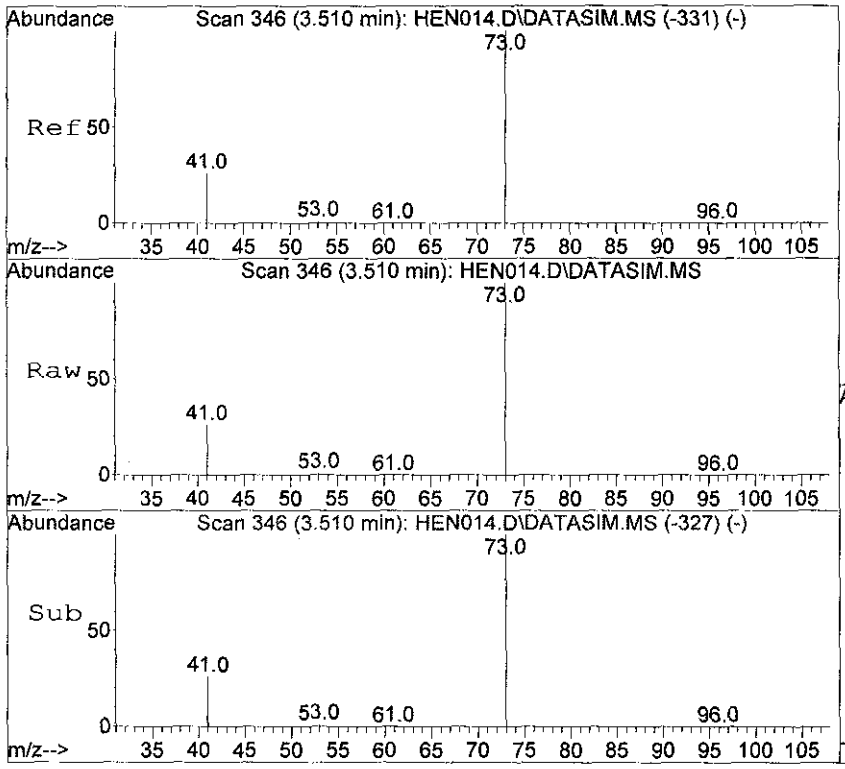


#3
1,1-Dichloroethene
Concen: 582.58 ppbv
RT: 3.132 min Scan# 269
Delta R.T. 0.009 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 61 Resp: 109121

Ion	Ratio	Lower	Upper
61	100		
96	55.0	43.8	65.6
63	31.4	25.1	37.7

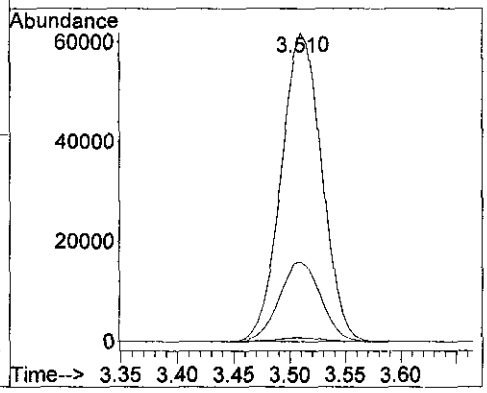


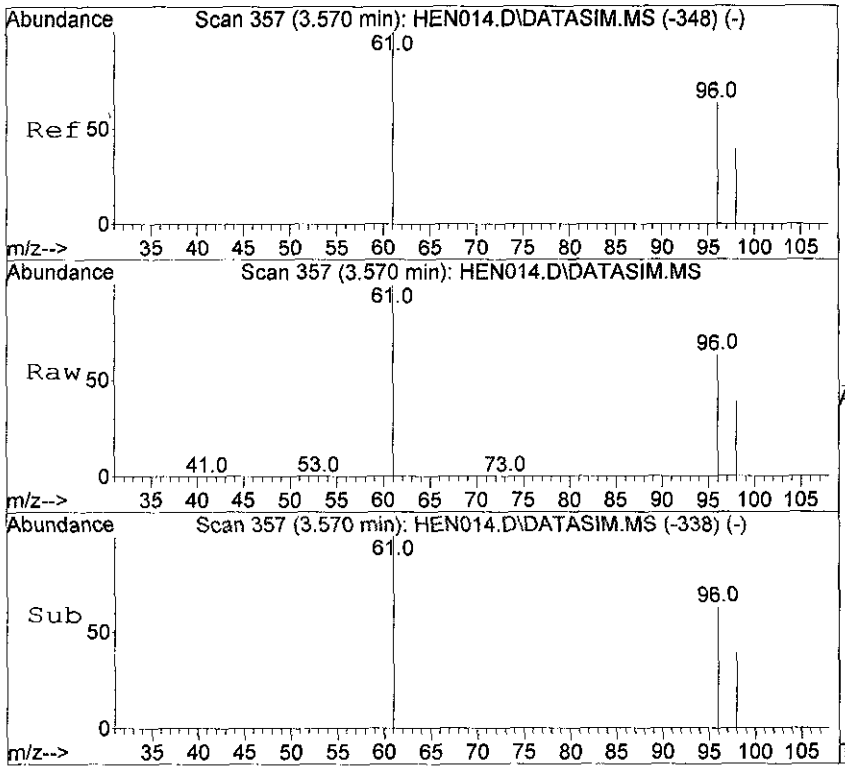


#4
Methyl Tert Butyl Ether
Concen: 559.18 ppbv
RT: 3.510 min Scan# 346
Delta R.T. 0.005 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 73 Resp: 155715

Ion	Ratio	Lower	Upper
73	100		
53	1.3	1.1	1.7
41	26.2	21.8	32.6

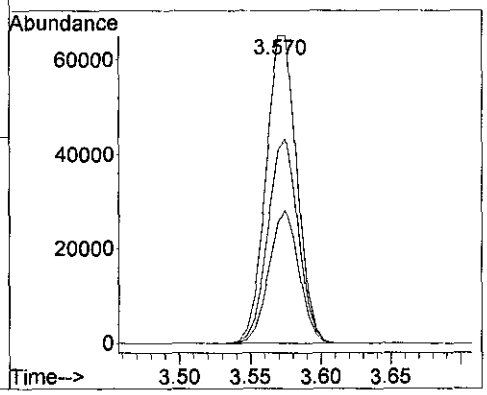


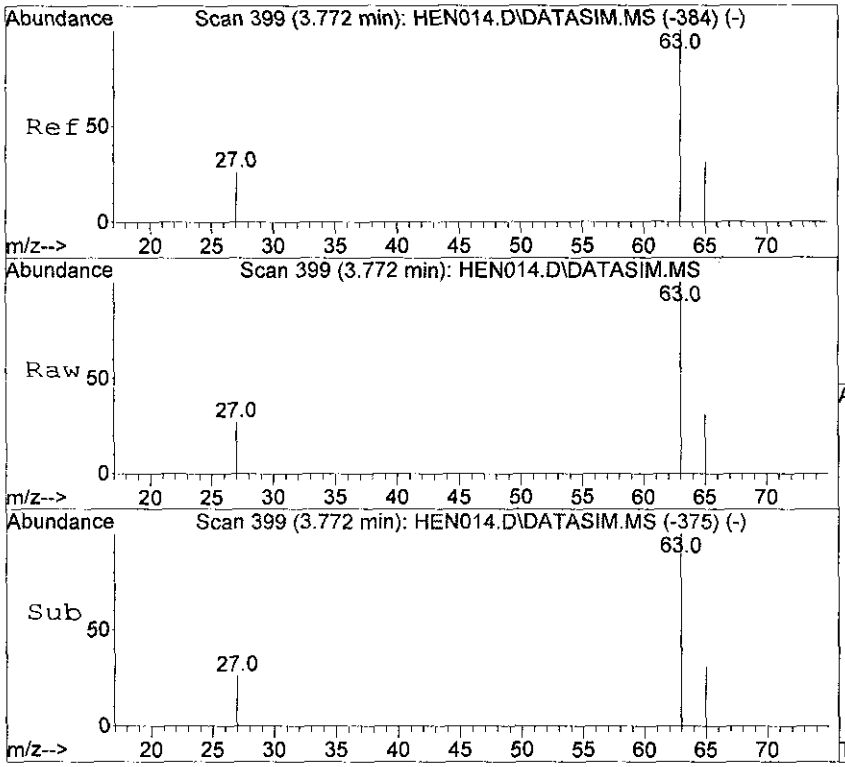


#5
trans-1,2-Dichloroethene
Concen: 597.91 ppbv
RT: 3.570 min Scan# 357
Delta R.T. 0.005 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 61 Resp: 99916

Ion	Ratio	Lower	Upper
61	100		
96	65.1	51.3	76.9
98	41.7	32.7	49.1

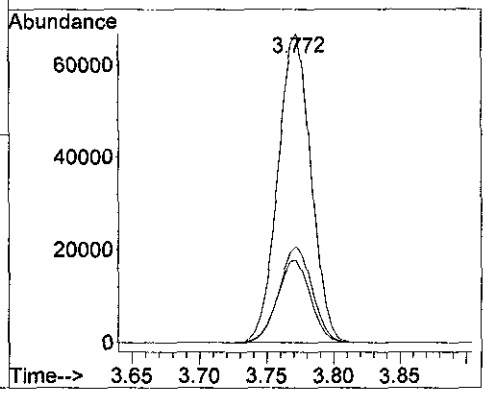


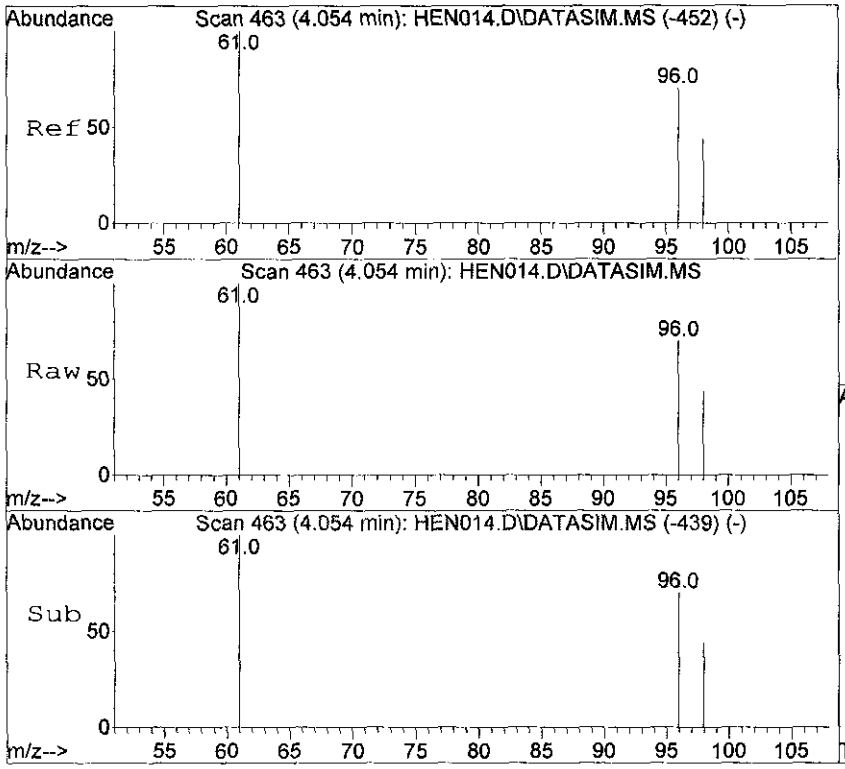


#6
1,1-Dichloroethane
Concen: 581.26 ppbv
RT: 3.772 min Scan# 399
Delta R.T. 0.004 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 63 Resp: 114883

Ion	Ratio	Lower	Upper
63	100		
65	30.9	24.7	37.1
27	26.7	22.0	33.0

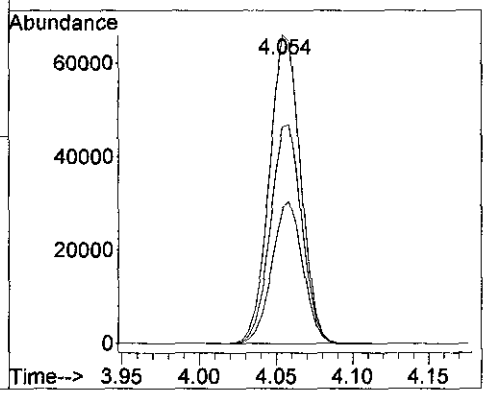


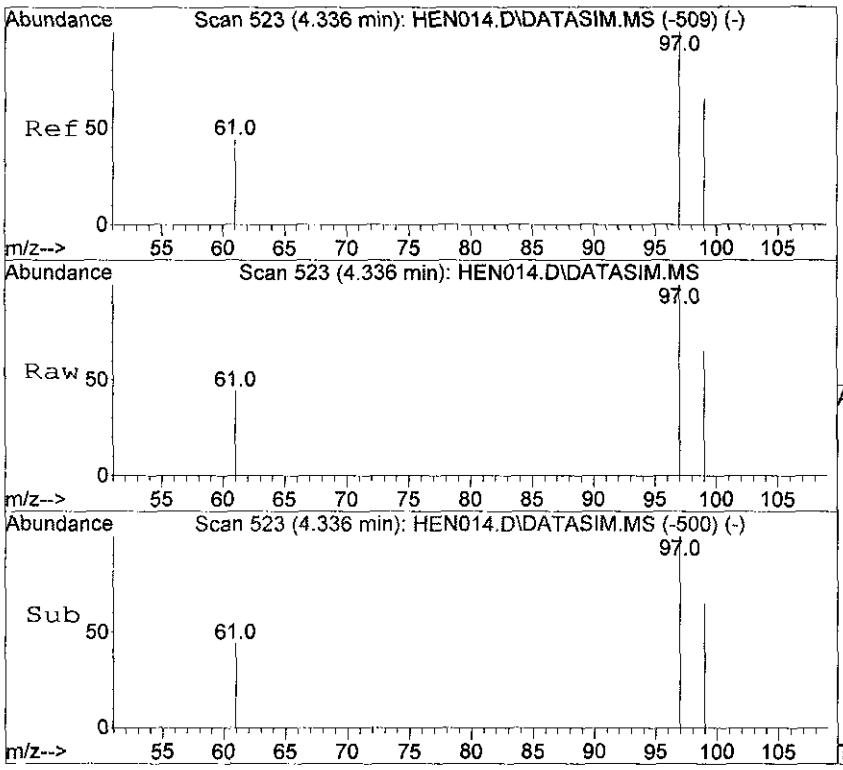


#7
cis-1,2-Dichloroethene
Concen: 593.08 ppbv
RT: 4.054 min Scan# 463
Delta R.T. 0.004 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 61 Resp: 94705

Ion	Ratio	Lower	Upper
61	100		
96	71.2	56.2	84.4
98	45.7	36.0	54.0

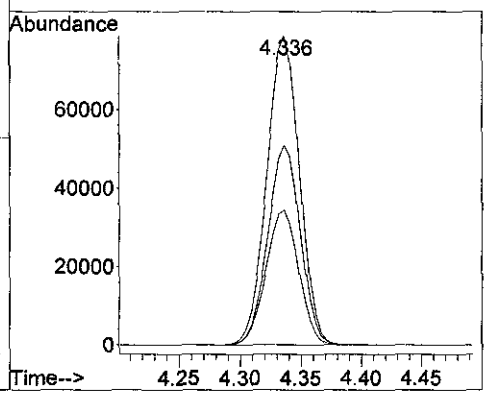


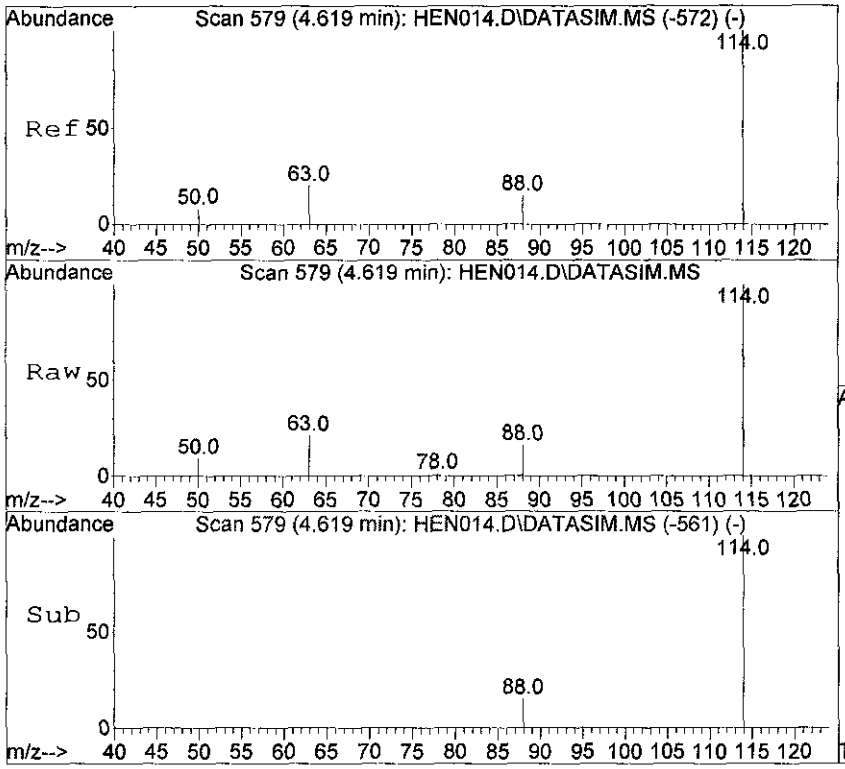


#8
1,1,1-Trichloroethane
Concen: 554.86 ppbv
RT: 4.336 min Scan# 523
Delta R.T. 0.004 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 97 Resp: 147843

Ion	Ratio	Lower	Upper
97	100		
99	64.5	51.5	77.3
61	43.9	35.8	53.8

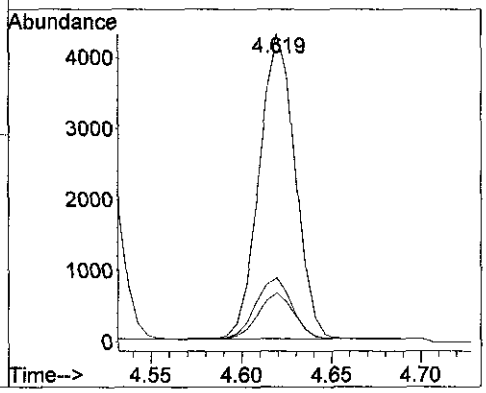


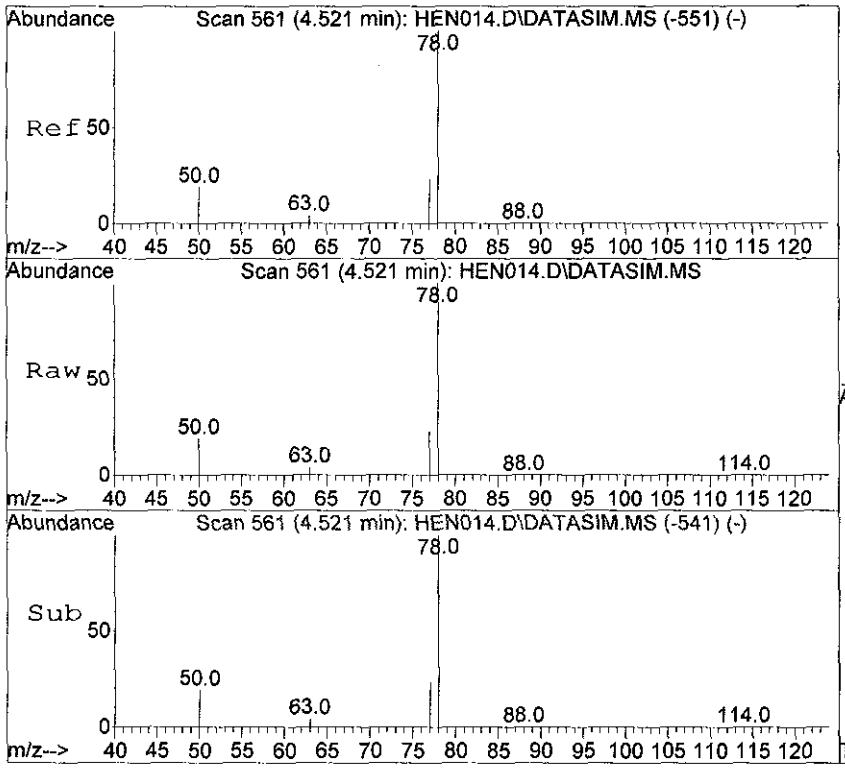


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. -0.000 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion:114 Resp: 5934

Ion	Ratio	Lower	Upper
114	100		
63	19.9	16.7	25.1
88	14.9	12.2	18.2

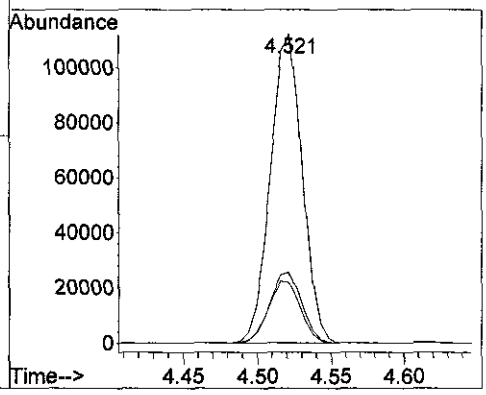


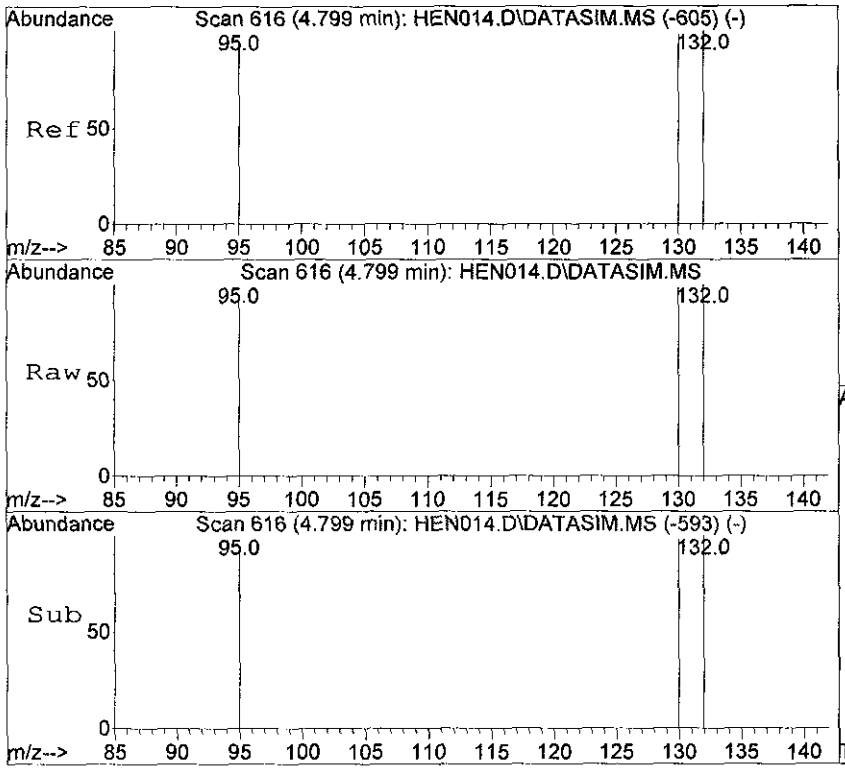


#10
Benzene
Concen: 559.08 ppbv
RT: 4.521 min Scan# 561
Delta R.T. 0.005 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 78 Resp: 168748

Ion	Ratio	Lower	Upper
78	100		
77	22.9	18.2	27.4
50	20.1	15.9	23.9

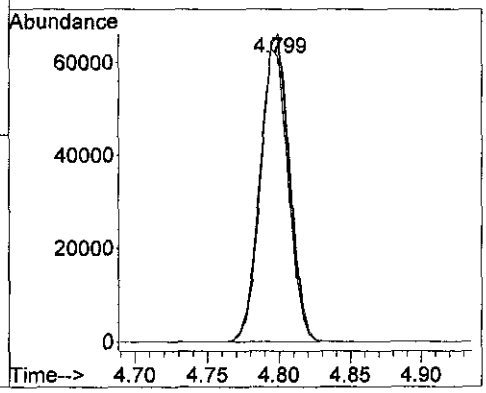


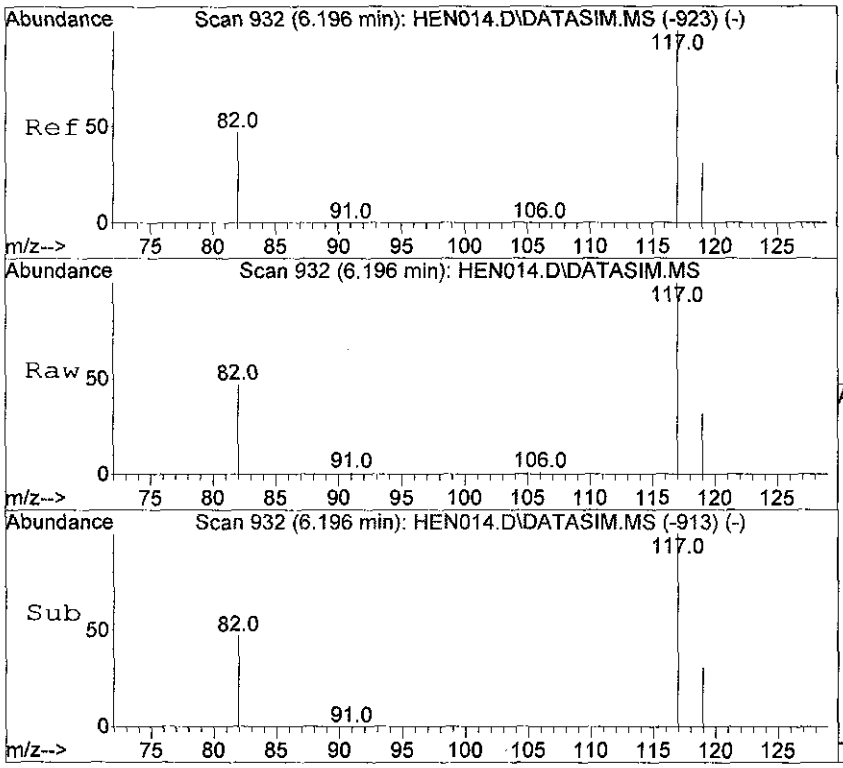


#11
Trichloroethene
Concen: 567.51 ppbv
RT: 4.799 min Scan# 616
Delta R.T. 0.003 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion:130 Resp: 90669

Ion	Ratio	Lower	Upper
130	100		
132	100.8	80.4	120.6
95	96.1	78.6	118.0

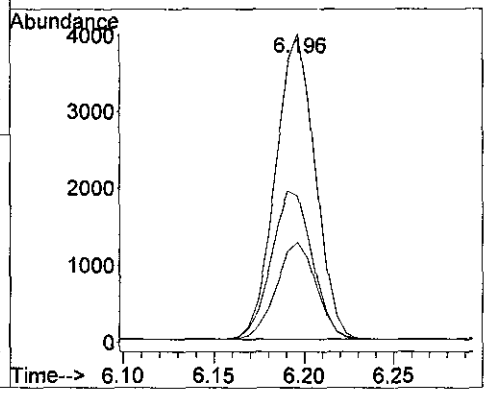


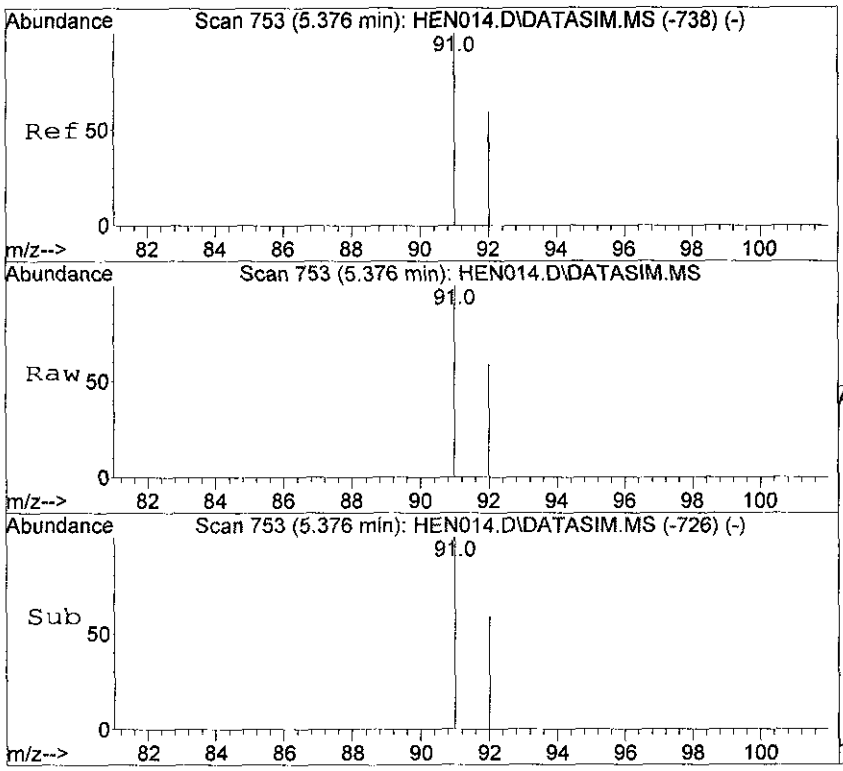


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. 0.004 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion:117 Resp: 6081

Ion	Ratio	Lower	Upper
117	100		
82	50.1	41.4	62.0
119	31.8	25.8	38.6

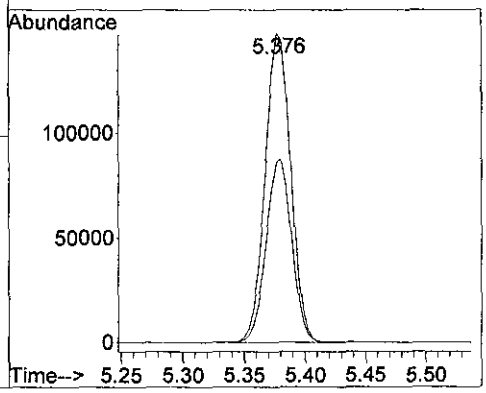


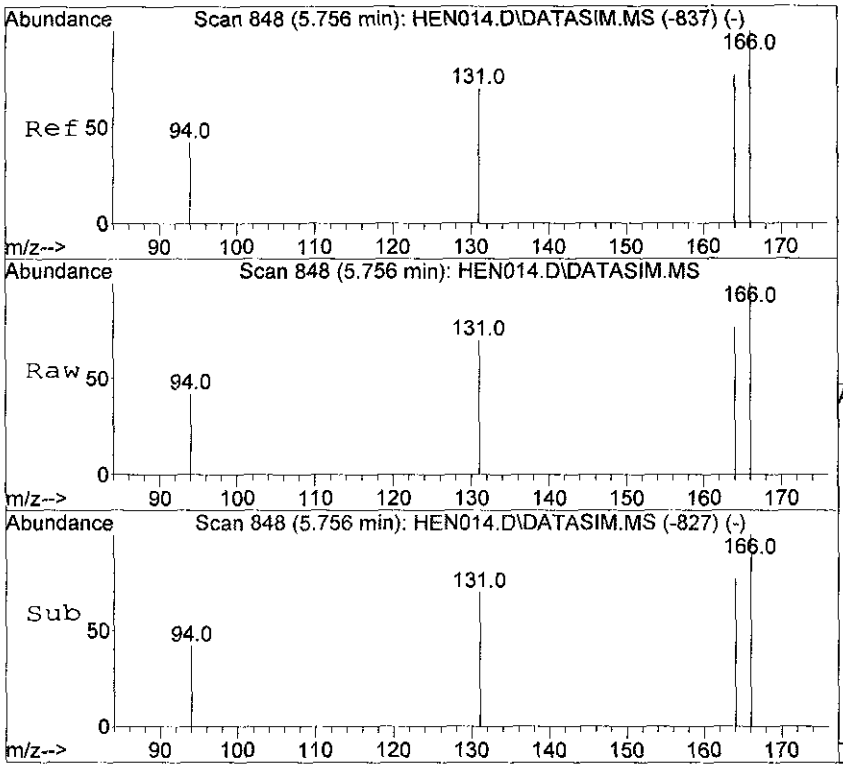


#13
Toluene
Concen: 574.08 ppbv
RT: 5.376 min Scan# 753
Delta R.T. -0.001 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 91 Resp: 215049

Ion	Ratio	Lower	Upper
91	100		
92	59.3	47.4	71.2

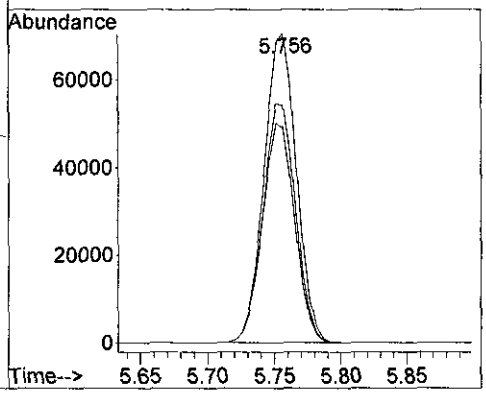


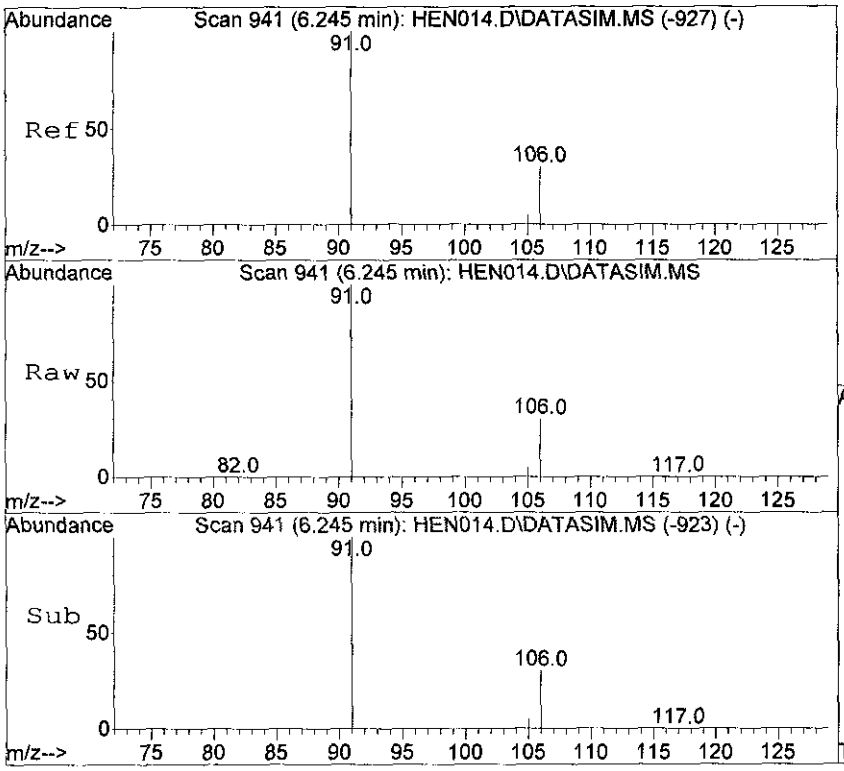


#14
Tetrachloroethene
Concen: 595.30 ppbv
RT: 5.756 min Scan# 848
Delta R.T. 0.004 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion:166 Resp: 119012

Ion	Ratio	Lower	Upper
166	100		
164	78.1	62.5	93.7
131	71.1	57.0	85.4

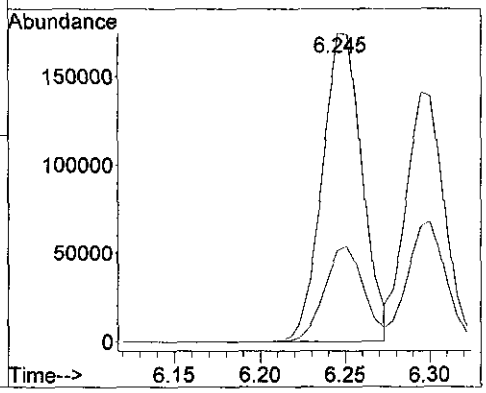


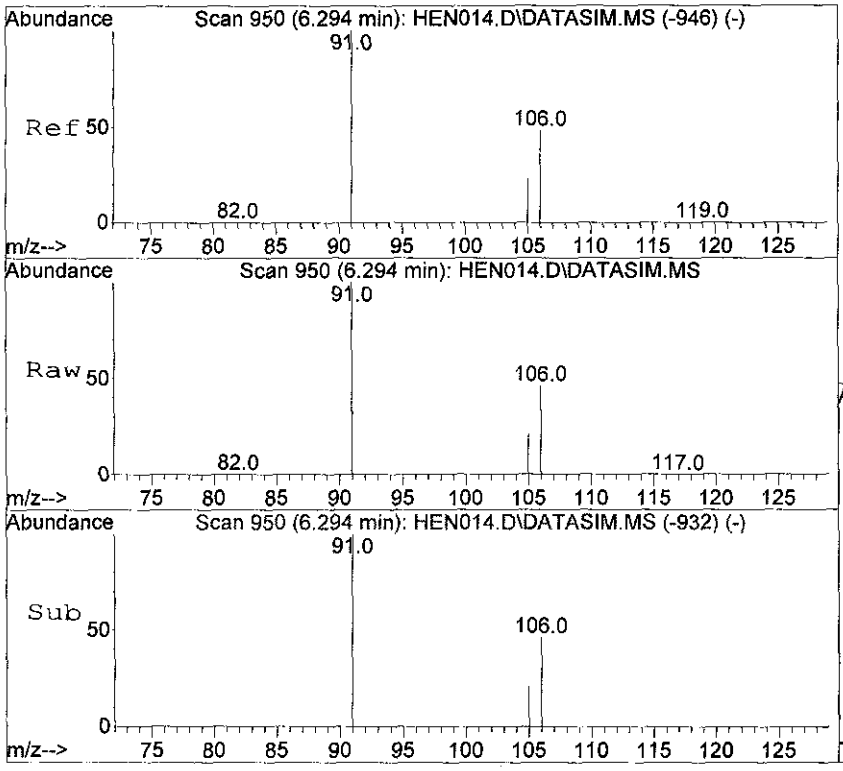


#15
Ethyl Benzene
Concen: 589.33 ppbv
RT: 6.245 min Scan# 941
Delta R.T. -0.002 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 91 Resp: 287129

Ion	Ratio	Lower	Upper
91	100		
106	29.5	23.9	35.9

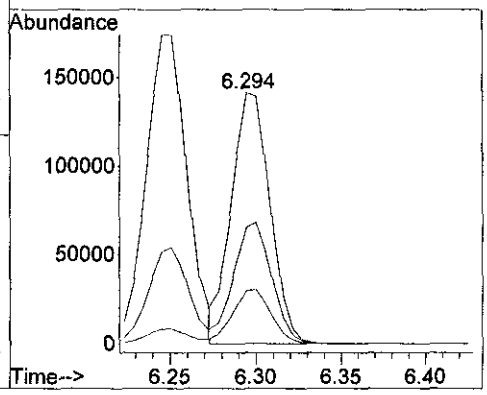


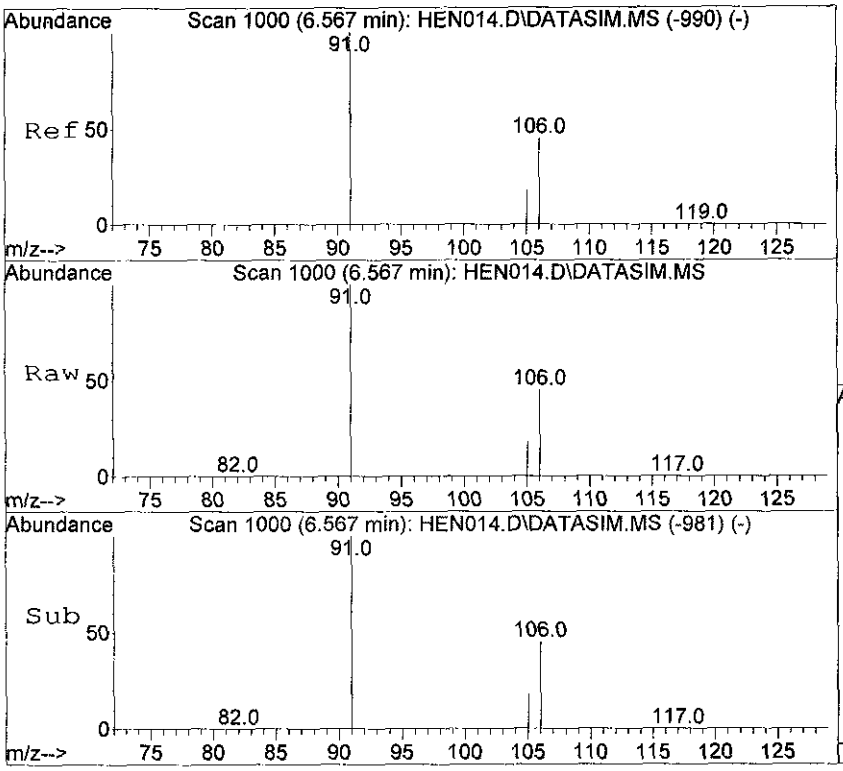


#16
m,p-Xylene
Concen: 588.27 ppbv
RT: 6.294 min Scan# 950
Delta R.T. -0.002 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 91 Resp: 221472

Ion	Ratio	Lower	Upper
91	100		
106	46.2	37.3	55.9
105	20.9	16.7	25.1

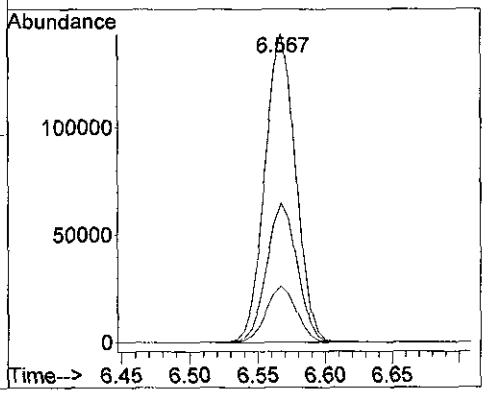




#17
o-Xylene
Concen: 598.71 ppbv
RT: 6.567 min Scan# 1000
Delta R.T. 0.004 min
Lab File: HEN014.D
Acq: 21 Mar 2012 6:33

Tgt Ion: 91 Resp: 227647

Ion	Ratio	Lower	Upper
91	100		
106	44.8	35.8	53.8
105	17.9	14.2	21.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN016.D
Acq On : 21 Mar 2012 6:56
Operator : SJT
Sample : 20120321-LCS \ 500ppbv LCS
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 07:02:34 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

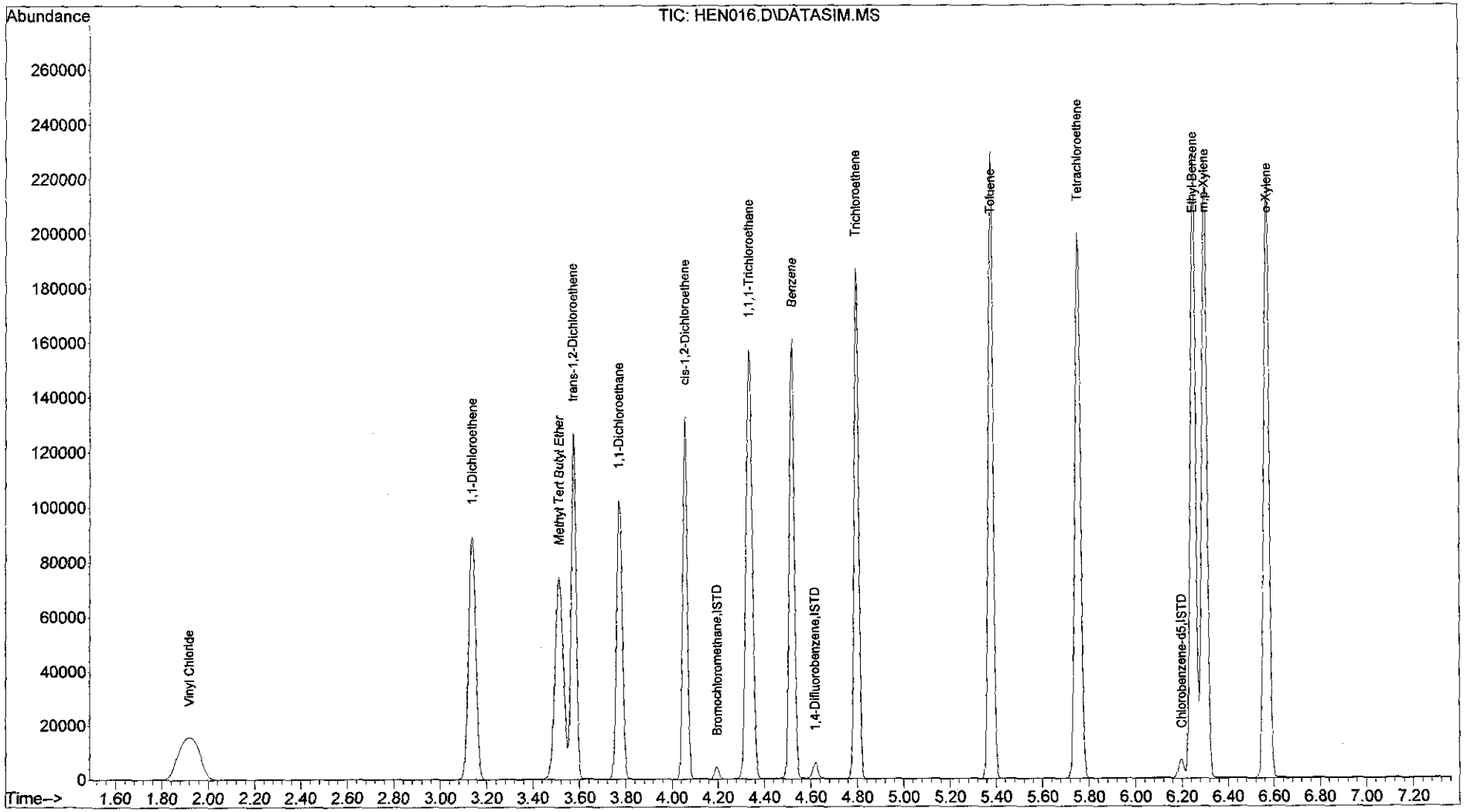
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.198	49	2372	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5568	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.198	117	5800	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Vinyl Chloride	1.919	62	55278	558.14	ppbv	100
3) 1,1-Dichloroethene	3.141	61	105310	589.73	ppbv	100
4) Methyl Tert Butyl Ether	3.515	73	145737	548.95	ppbv	99
5) trans-1,2-Dichloroethene	3.575	61	91534	574.54	ppbv	99
6) 1,1-Dichloroethane	3.772	63	111596	592.24	ppbv	99
7) cis-1,2-Dichloroethene	4.059	61	86940	571.08	ppbv	99
8) 1,1,1-Trichloroethane	4.336	97	142184	559.72	ppbv	100
10) Benzene	4.521	78	163338	576.72	ppbv	100
11) Trichloroethene	4.796	130	86638	577.93	ppbv	99
13) Toluene	5.377	91	207700	581.32	ppbv	100
14) Tetrachloroethene	5.752	166	115124	603.75	ppbv	100
15) Ethyl Benzene	6.247	91	273463	588.47	ppbv	100
16) m,p-Xylene	6.296	91	208460	580.53	ppbv	100
17) o-Xylene	6.568	91	216446	596.83	ppbv	100

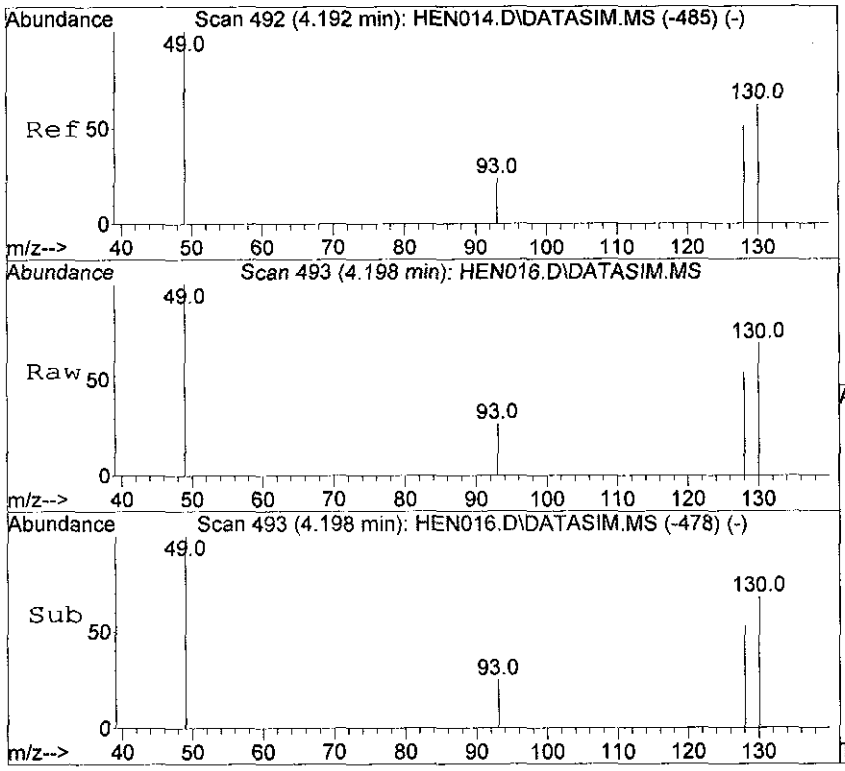
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN016.D
Acq On : 21 Mar 2012 6:56
Operator : SJT
Sample : 20120321-LCS \ 500ppbv LCS
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 07:02:34 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

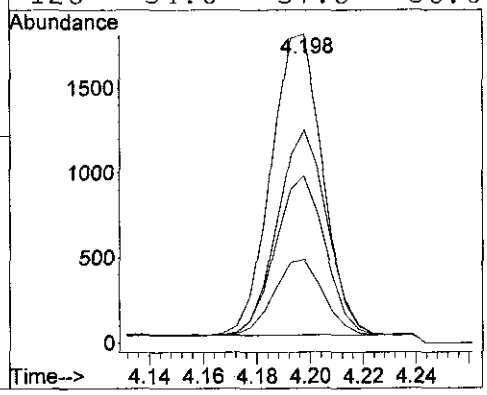


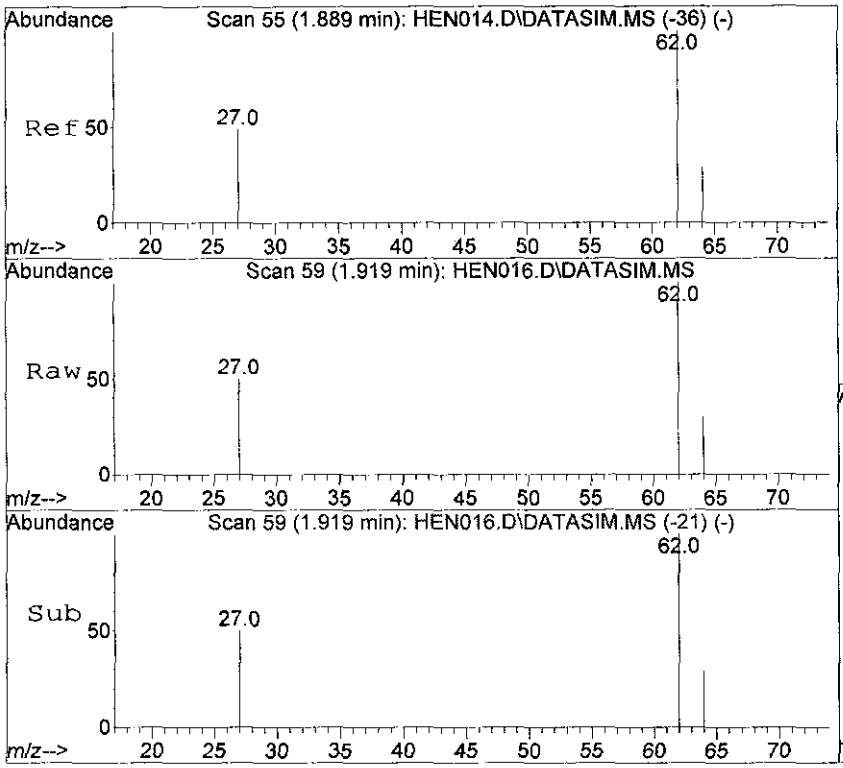


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.198 min Scan# 493
Delta R.T. 0.005 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 49 Resp: 2372

Ion	Ratio	Lower	Upper
49	100		
130	69.0	46.5	69.7
93	26.9	19.0	28.6
128	54.0	37.8	56.6

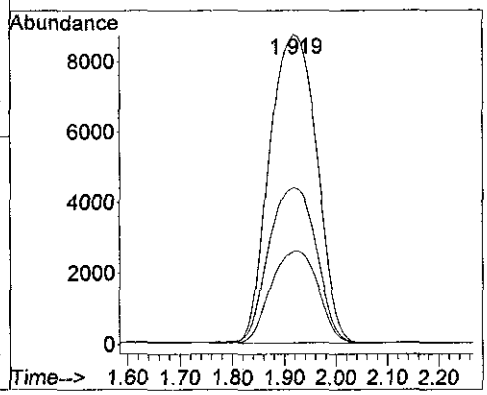


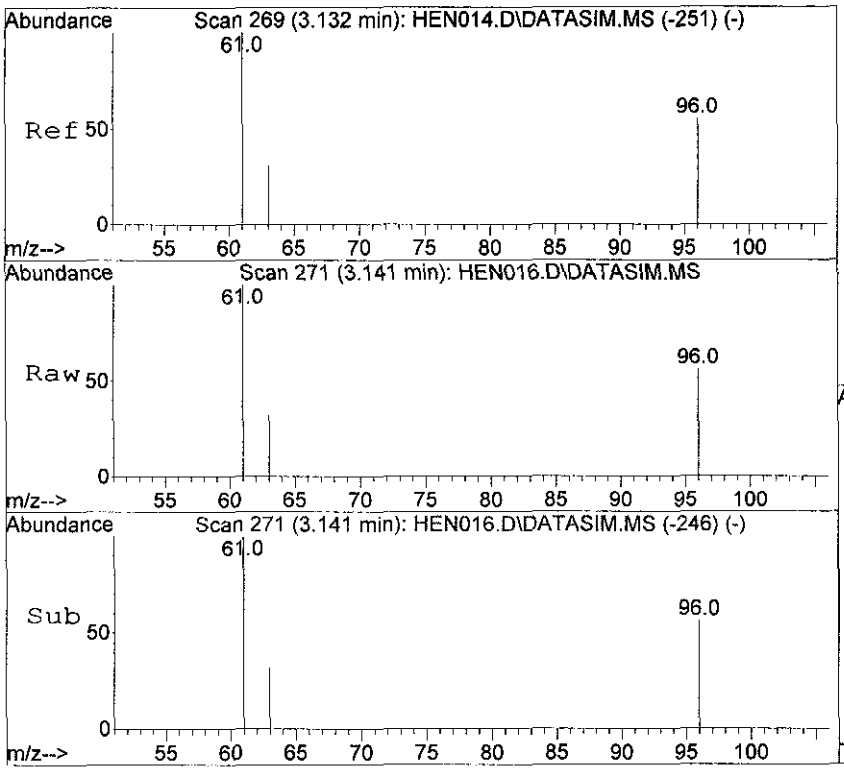


#2
Vinyl Chloride
Concen: 558.14 ppbv
RT: 1.919 min Scan# 59
Delta R.T. 0.030 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 62 Resp: 55278

Ion	Ratio	Lower	Upper
62	100		
64	29.6	23.7	35.5
27	50.2	39.8	59.8

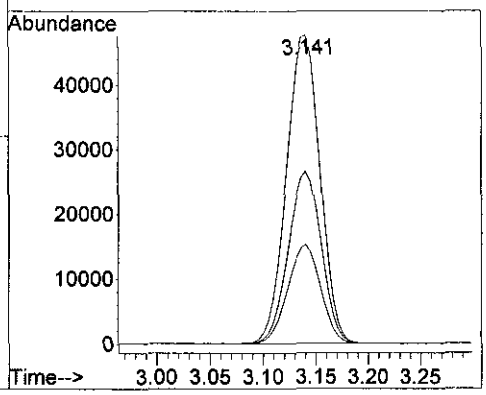


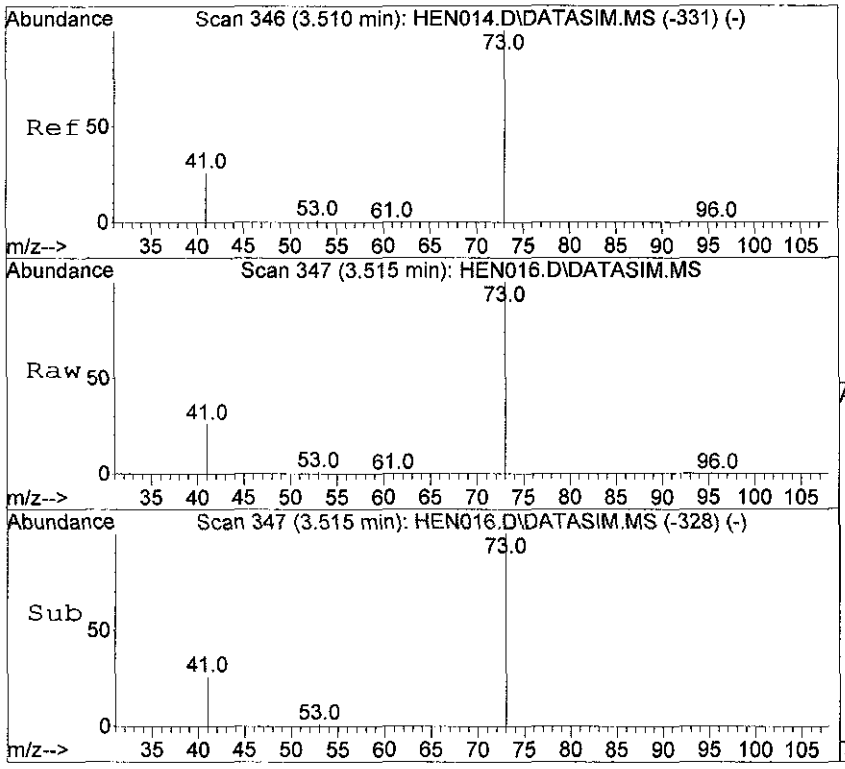


#3
1,1-Dichloroethene
Concen: 589.73 ppbv
RT: 3.141 min Scan# 271
Delta R.T. 0.009 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 61 Resp: 105310

Ion	Ratio	Lower	Upper
61	100		
96	55.0	43.8	65.6
63	31.4	25.1	37.7

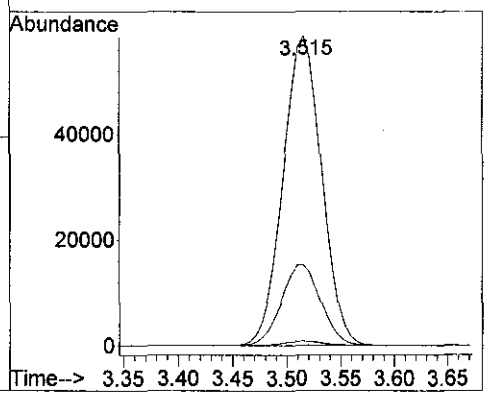


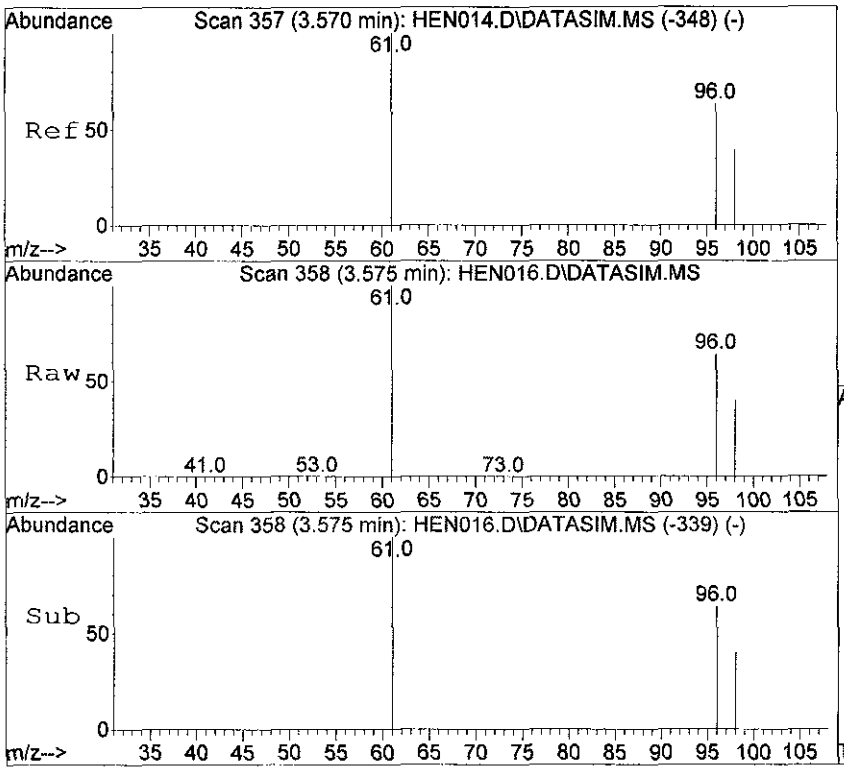


#4
Methyl Tert Butyl Ether
Concen: 548.95 ppbv
RT: 3.515 min Scan# 347
Delta R.T. 0.006 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 73 Resp: 145737

Ion	Ratio	Lower	Upper
73	100		
53	1.3	1.1	1.7
41	26.5	21.8	32.6

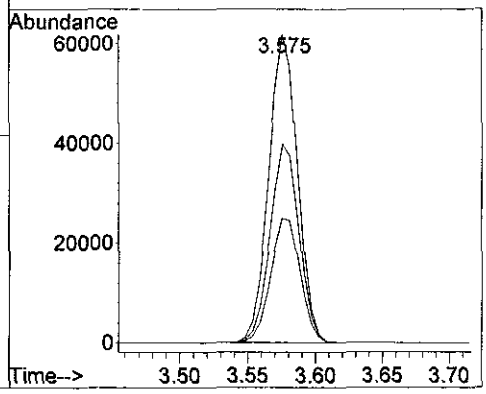


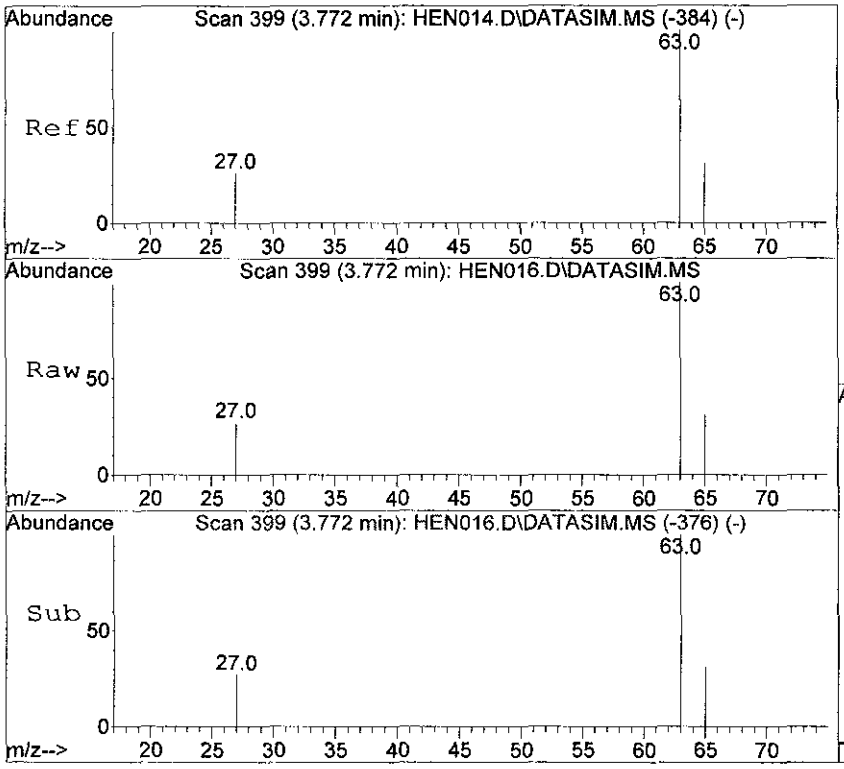


#5
trans-1,2-Dichloroethene
Concen: 574.54 ppbv
RT: 3.575 min Scan# 358
Delta R.T. 0.006 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 61 Resp: 91534

Ion	Ratio	Lower	Upper
61	100		
96	64.9	51.3	76.9
98	41.5	32.7	49.1

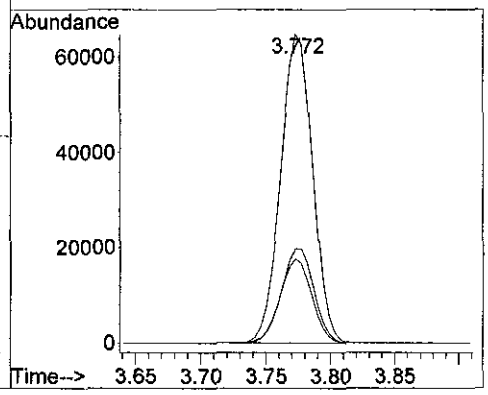


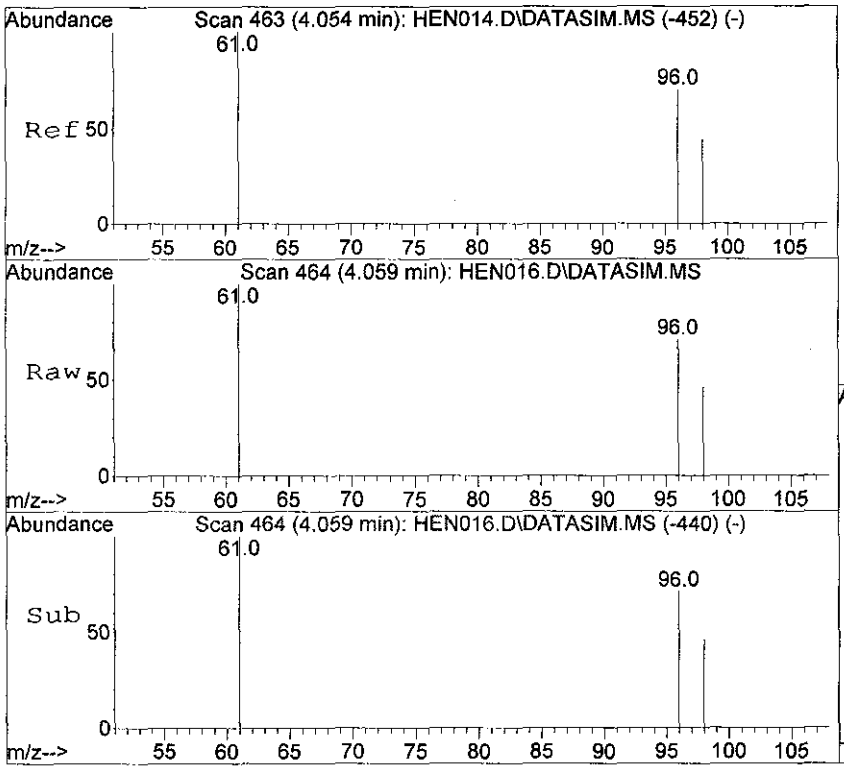


#6
1,1-Dichloroethane
Concen: 592.24 ppbv
RT: 3.772 min Scan# 399
Delta R.T. 0.000 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 63 Resp: 111596

Ion	Ratio	Lower	Upper
63	100		
65	31.0	24.7	37.1
27	27.1	22.0	33.0

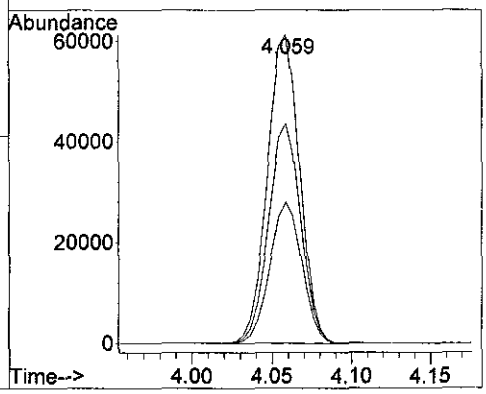


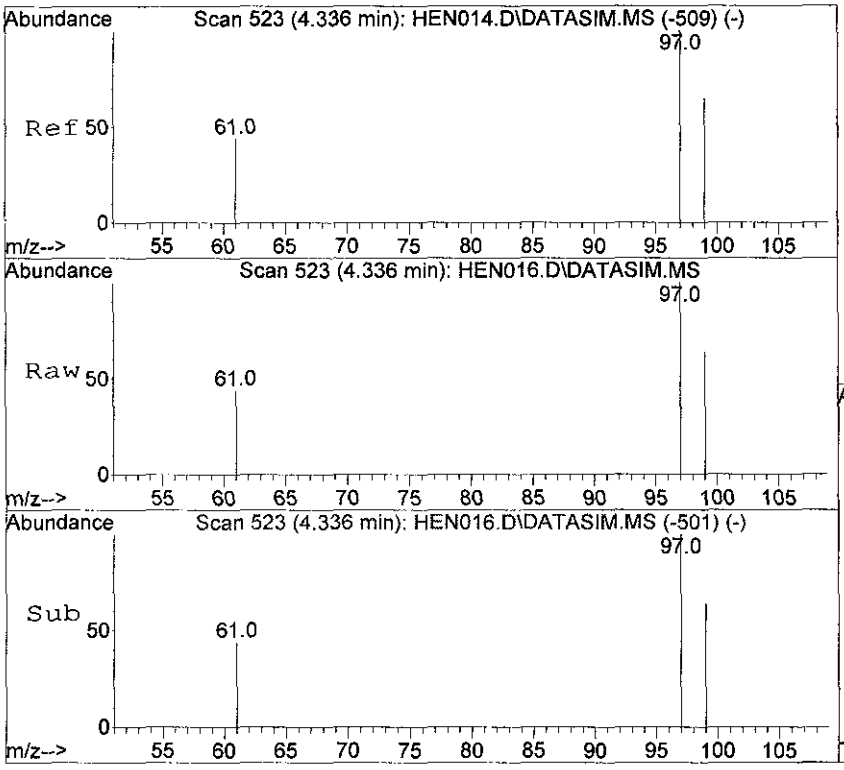


#7
cis-1,2-Dichloroethene
Concen: 571.08 ppbv
RT: 4.059 min Scan# 464
Delta R.T. 0.005 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 61 Resp: 86940

Ion	Ratio	Lower	Upper
61	100		
96	70.8	56.2	84.4
98	45.5	36.0	54.0

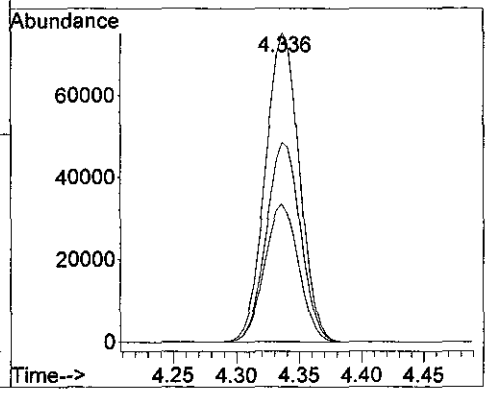


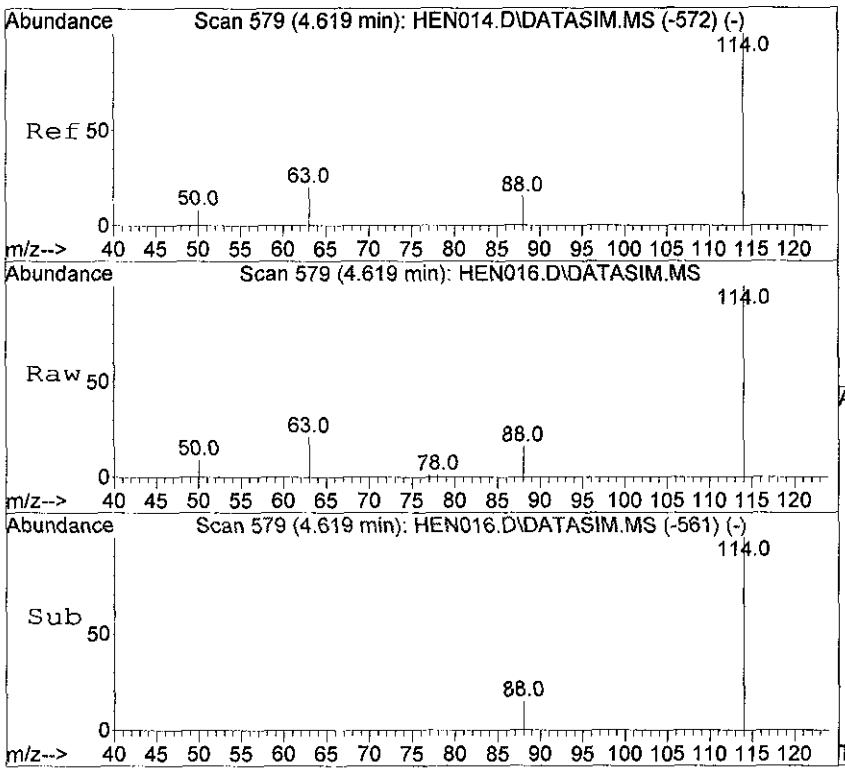


#8
1,1,1-Trichloroethane
Concen: 559.72 ppbv
RT: 4.336 min Scan# 523
Delta R.T. 0.000 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 97 Resp: 142184

Ion	Ratio	Lower	Upper
97	100		
99	64.5	51.5	77.3
61	44.4	35.8	53.8

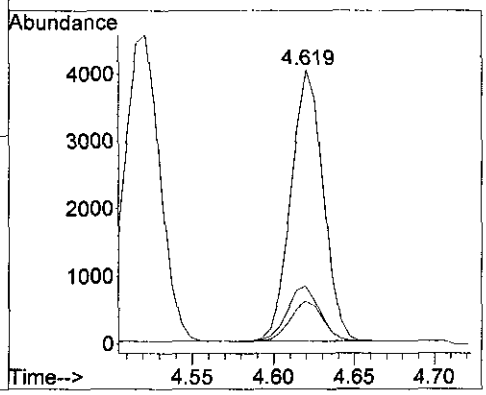


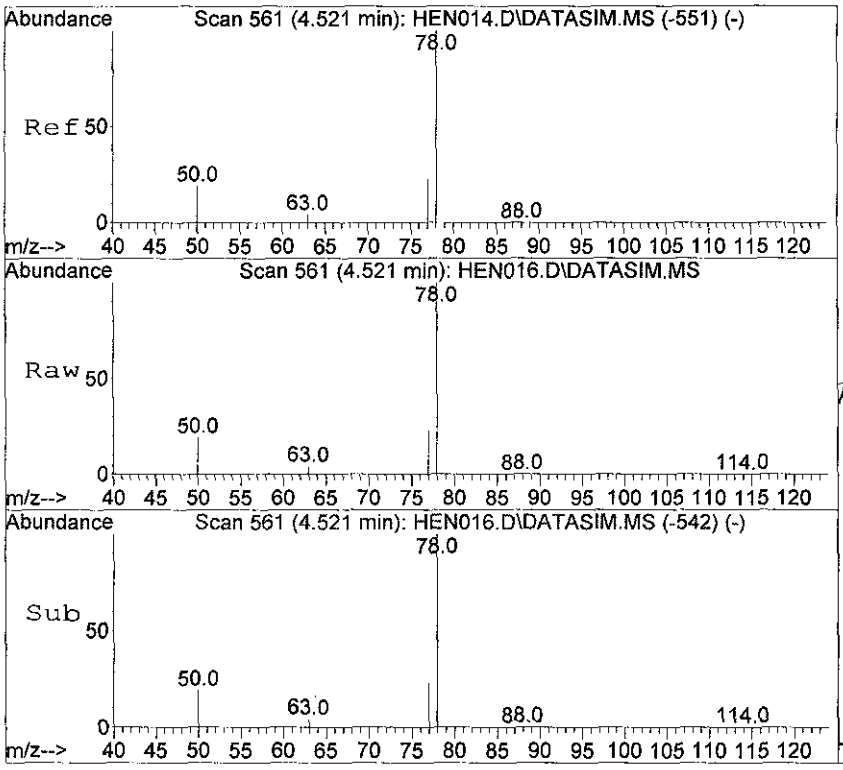


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion:114 Resp: 5568

Ion	Ratio	Lower	Upper
114	100		
63	20.3	16.7	25.1
88	14.9	12.2	18.2

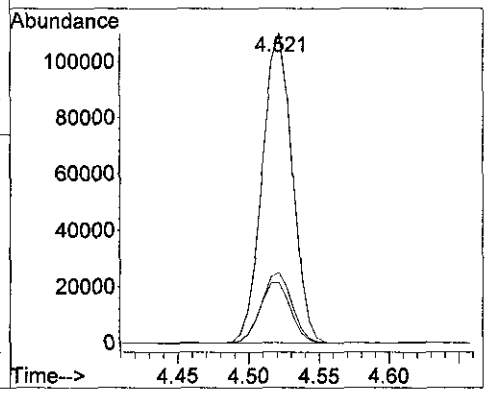


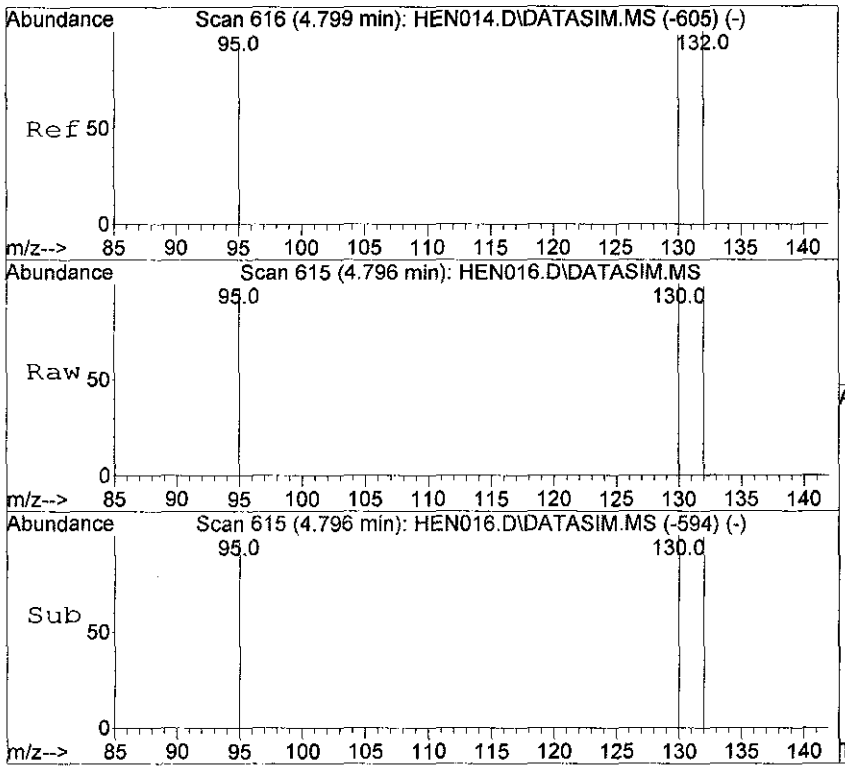


#10
Benzene
Concen: 576.72 ppbv
RT: 4.521 min Scan# 561
Delta R.T. 0.000 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 78 Resp: 163338

Ion	Ratio	Lower	Upper
78	100		
77	22.9	18.2	27.4
50	20.1	15.9	23.9

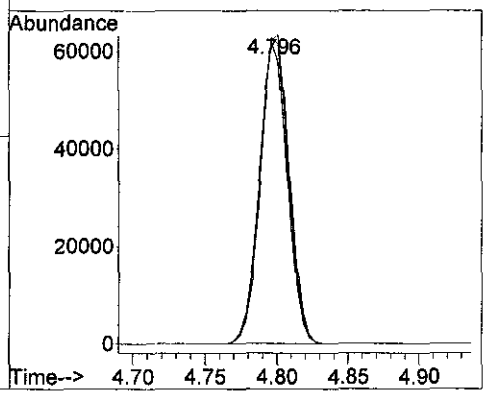


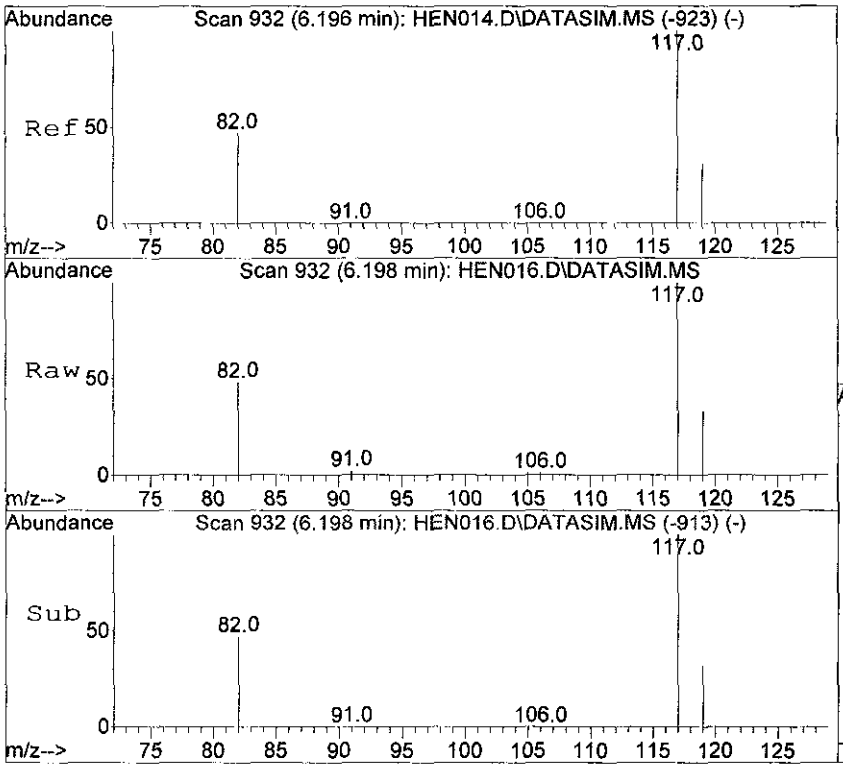


#11
Trichloroethene
Concen: 577.93 ppbv
RT: 4.796 min Scan# 615
Delta R.T. -0.003 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion:130 Resp: 86638

Ion	Ratio	Lower	Upper
130	100		
132	101.0	80.4	120.6
95	96.7	78.6	118.0

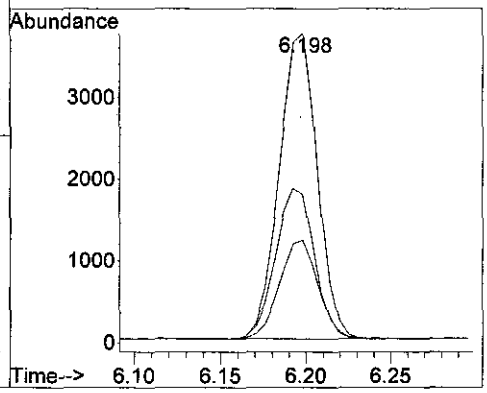


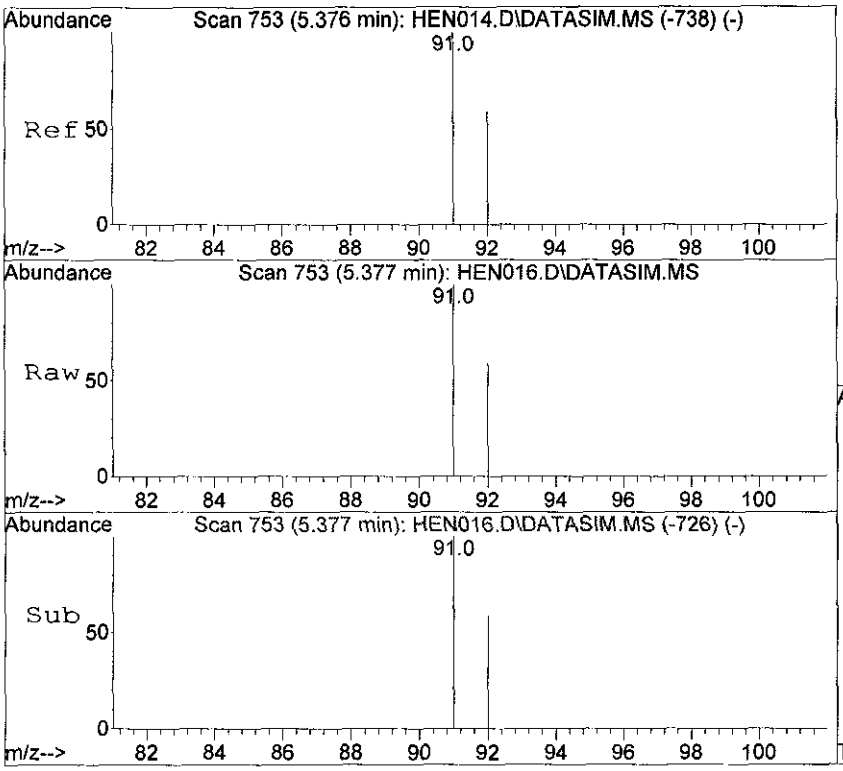


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.198 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion:117 Resp: 5800

Ion	Ratio	Lower	Upper
117	100		
82	50.1	41.4	62.0
119	32.3	25.8	38.6

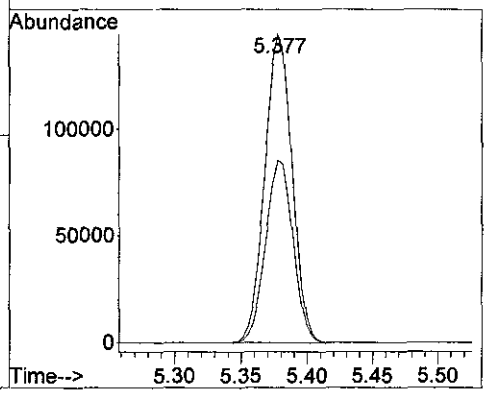


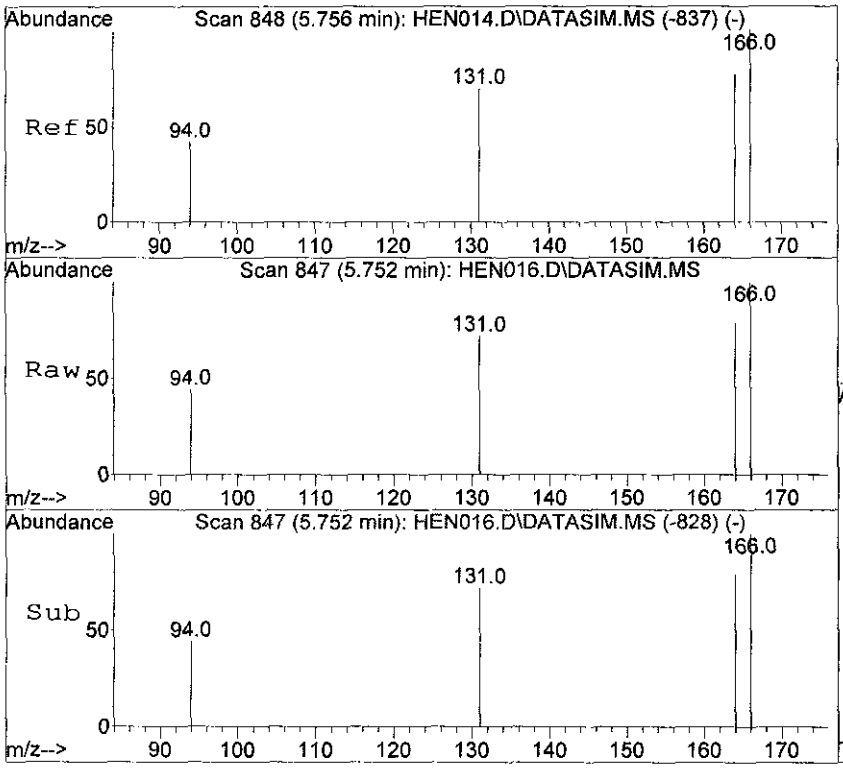


#13
Toluene
Concen: 581.32 ppbv
RT: 5.377 min Scan# 753
Delta R.T. 0.001 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 91 Resp: 207700

Ion	Ratio	Lower	Upper
91	100		
92	59.3	47.4	71.2

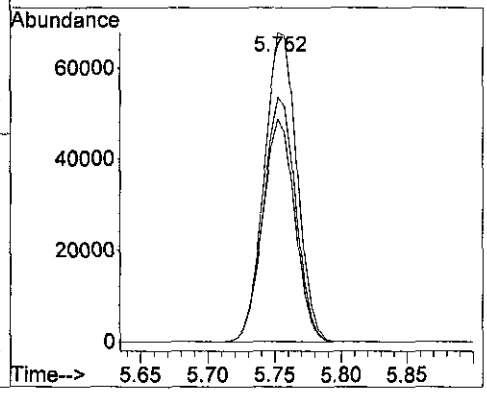


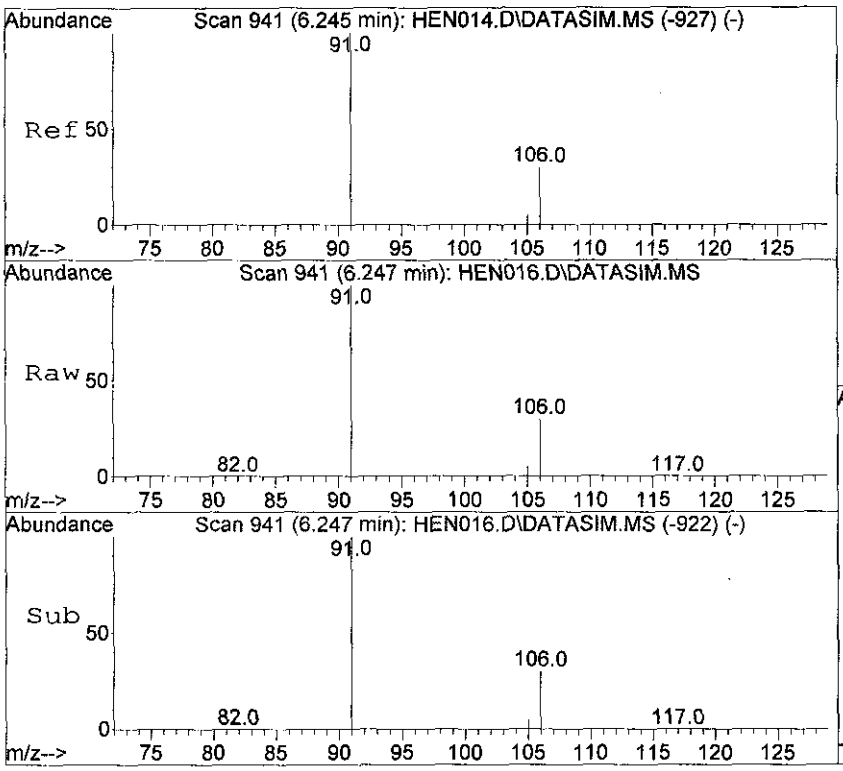


#14
Tetrachloroethene
Concen: 603.75 ppbv
RT: 5.752 min Scan# 847
Delta R.T. -0.004 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion:166 Resp: 115124

Ion	Ratio	Lower	Upper
166	100		
164	78.2	62.5	93.7
131	71.0	57.0	85.4

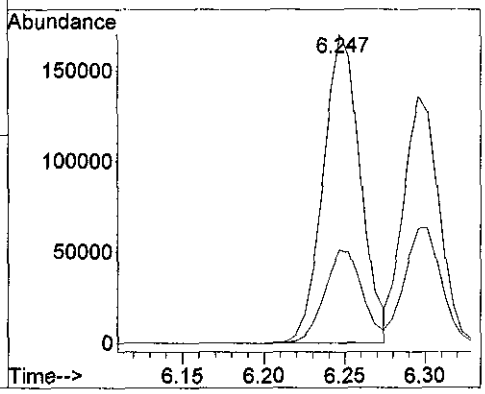


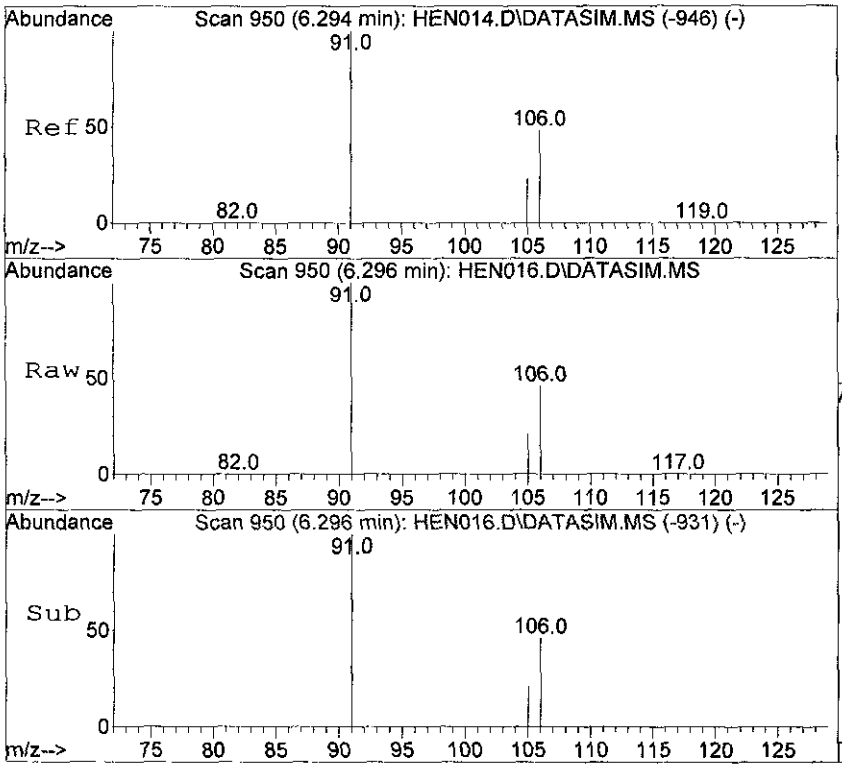


#15
Ethyl Benzene
Concen: 588.47 ppbv
RT: 6.247 min Scan# 941
Delta R.T. 0.001 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 91 Resp: 273463

Ion	Ratio	Lower	Upper
91	100		
106	30.0	23.9	35.9

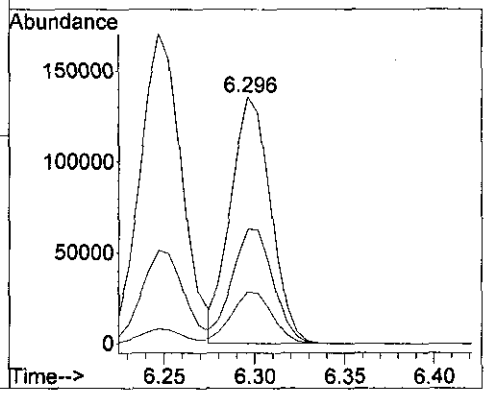


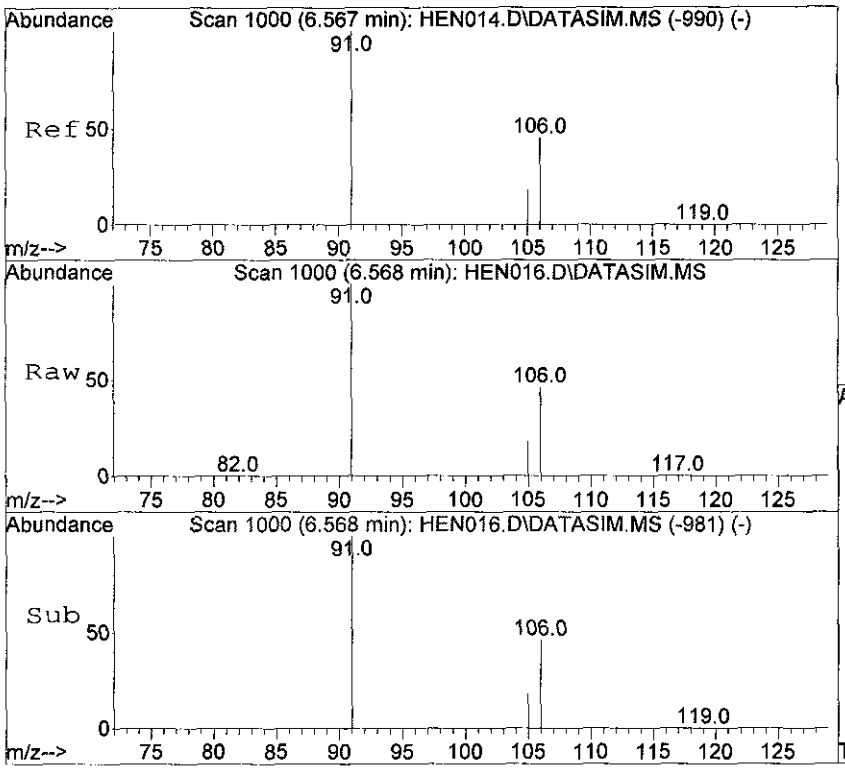


#16
m,p-Xylene
Concen: 580.53 ppbv
RT: 6.296 min Scan# 950
Delta R.T. 0.001 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 91 Resp: 208460

Ion	Ratio	Lower	Upper
91	100		
106	46.5	37.3	55.9
105	21.1	16.7	25.1

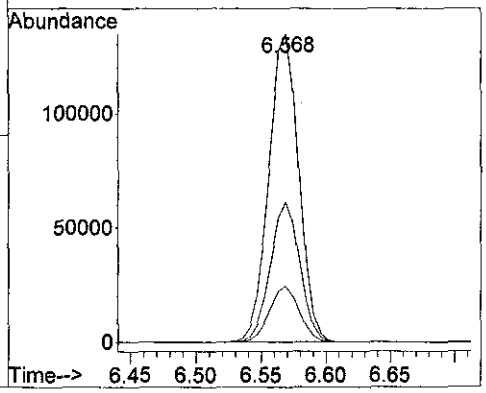




#17
o-Xylene
Concen: 596.83 ppbv
RT: 6.568 min Scan# 1000
Delta R.T. 0.001 min
Lab File: HEN016.D
Acq: 21 Mar 2012 6:56

Tgt Ion: 91 Resp: 216446

Ion	Ratio	Lower	Upper
91	100		
106	44.9	35.8	53.8
105	18.0	14.2	21.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN017.D
Acq On : 21 Mar 2012 12:09
Operator : SJT
Sample : 20120321-LCS \ 500ppbv LCS
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 12:15:54 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

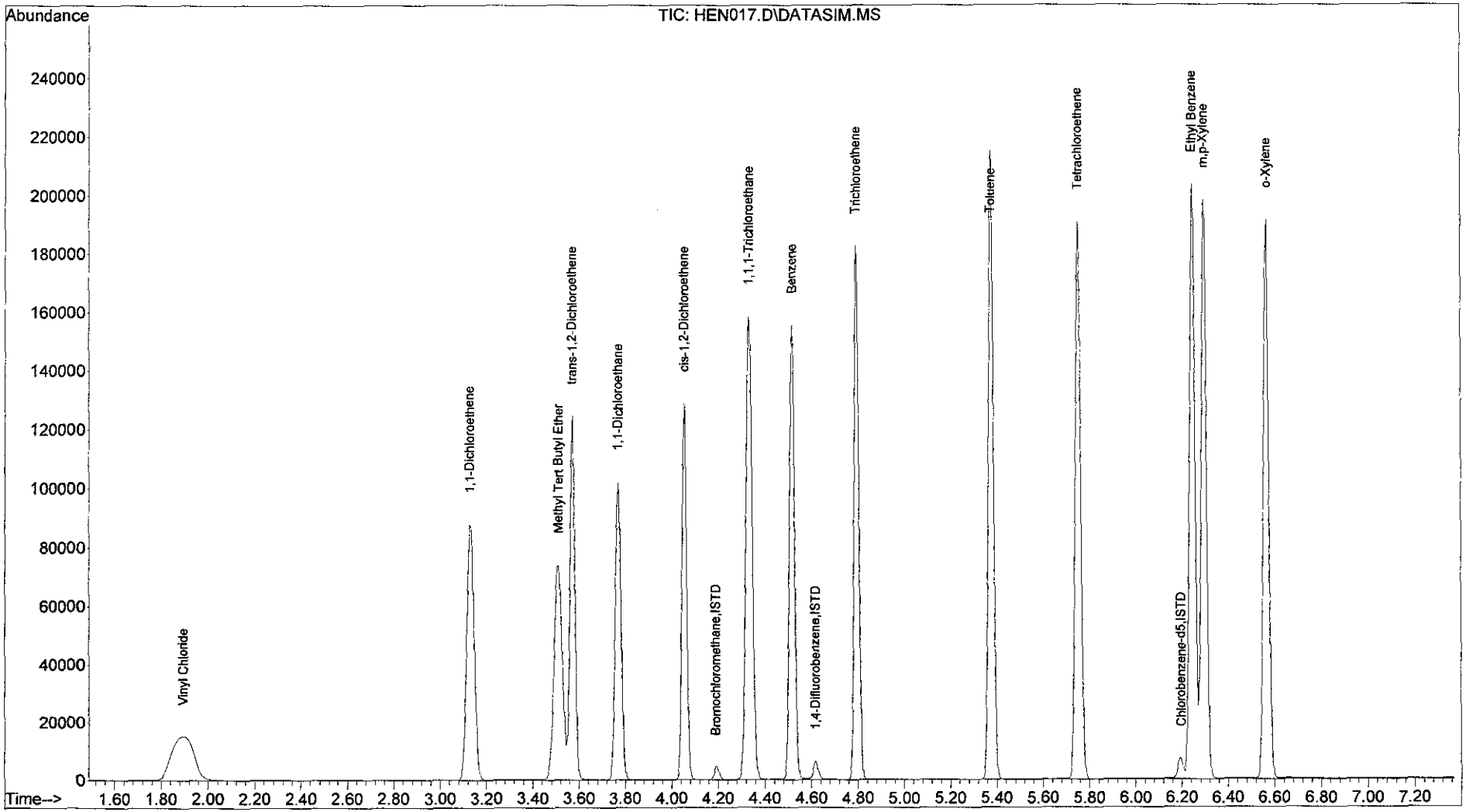
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.191	49	2454	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5763	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.197	117	6037	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Vinyl Chloride	1.896	62	55079	537.55	ppbv	99
3) 1,1-Dichloroethene	3.132	61	105088	568.82	ppbv	100
4) Methyl Tert Butyl Ether	3.514	73	145862	531.06	ppbv	98
5) trans-1,2-Dichloroethene	3.574	61	89562	543.38	ppbv	99
6) 1,1-Dichloroethane	3.771	63	110810	568.42	ppbv	99
7) cis-1,2-Dichloroethene	4.058	61	83884	532.59	ppbv	99
8) 1,1,1-Trichloroethane	4.336	97	142732	543.10	ppbv	99
10) Benzene	4.521	78	158460	540.57	ppbv	100
11) Trichloroethene	4.796	130	83992	541.32	ppbv	99
13) Toluene	5.377	91	194674	523.47	ppbv	100
14) Tetrachloroethene	5.751	166	109059	549.49	ppbv	100
15) Ethyl Benzene	6.246	91	244935	506.39	ppbv	100
16) m,p-Xylene	6.295	91	181734	486.24	ppbv	100
17) o-Xylene	6.568	91	186113	493.05	ppbv	100

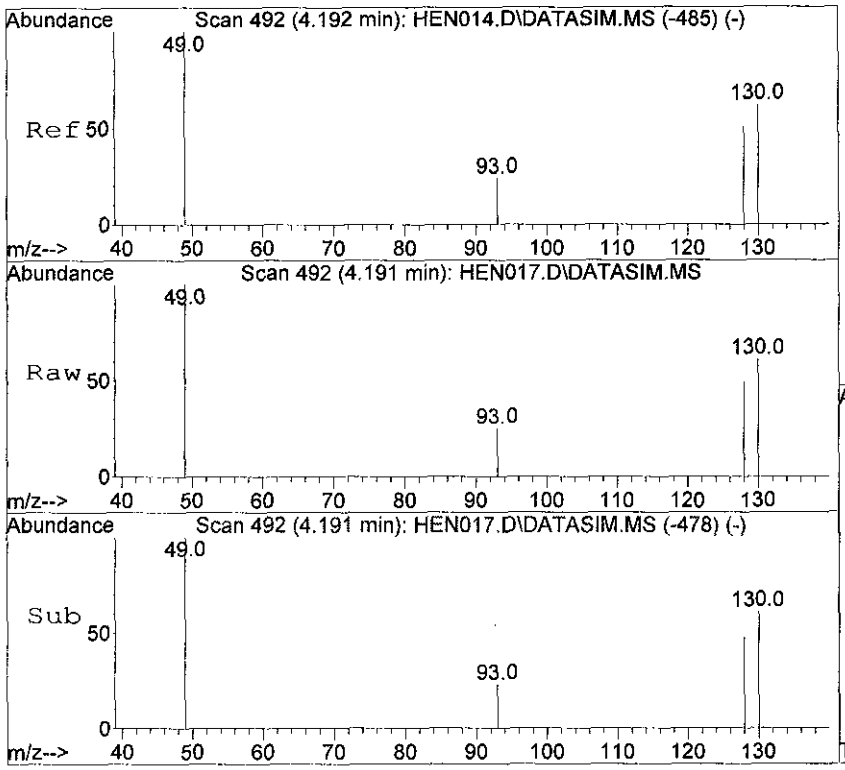
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN017.D
Acq On : 21 Mar 2012 12:09
Operator : SJT
Sample : 20120321-LCS \ 500ppbv LCS
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 12:15:54 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

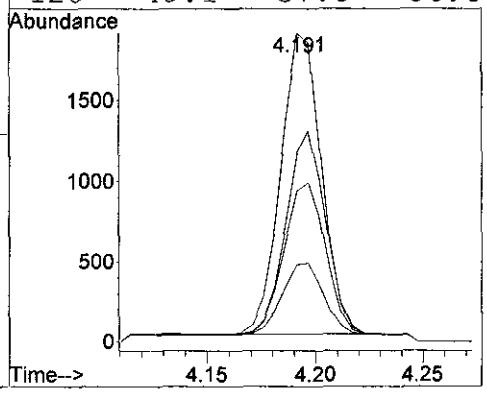


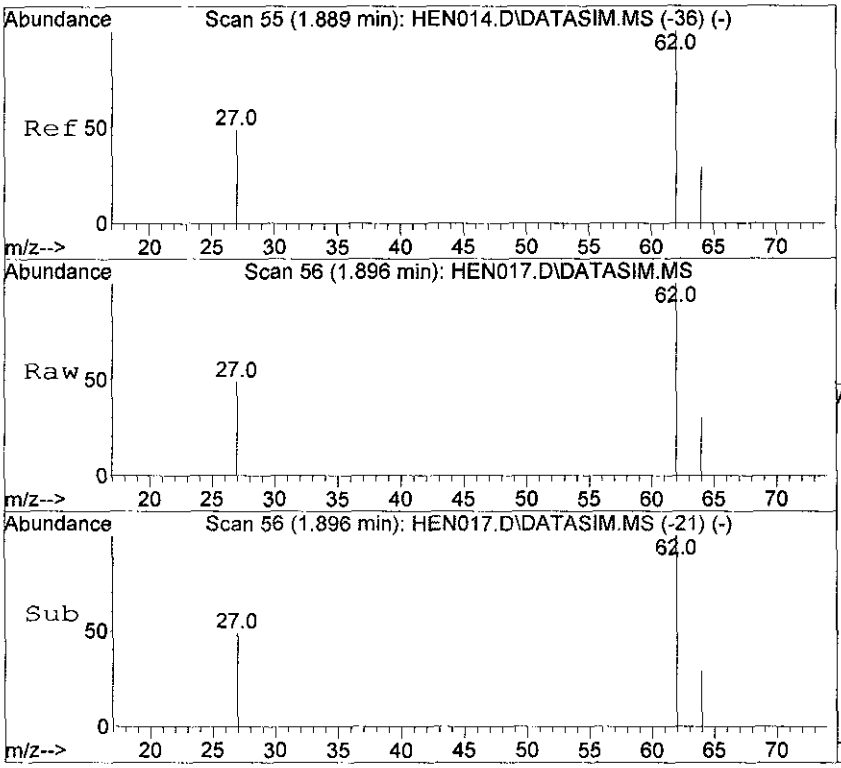


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.191 min Scan# 492
Delta R.T. -0.001 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 49 Resp: 2454

Ion	Ratio	Lower	Upper
49	100		
130	61.4	46.5	69.7
93	25.2	19.0	28.6
128	49.1	37.8	56.6

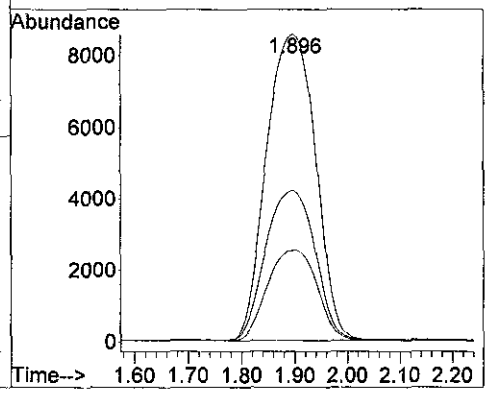


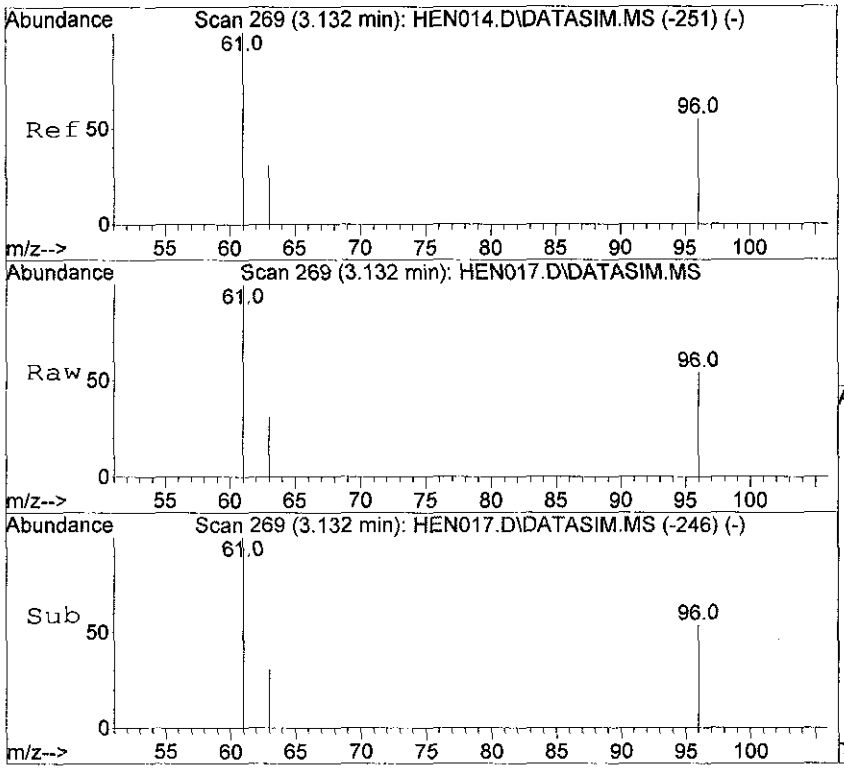


#2
Vinyl Chloride
Concen: 537.55 ppbv
RT: 1.896 min Scan# 56
Delta R.T. 0.007 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 62 Resp: 55079

Ion	Ratio	Lower	Upper
62	100		
64	29.7	23.7	35.5
27	49.0	39.8	59.8

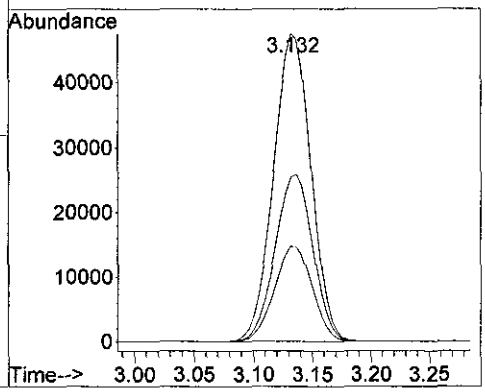


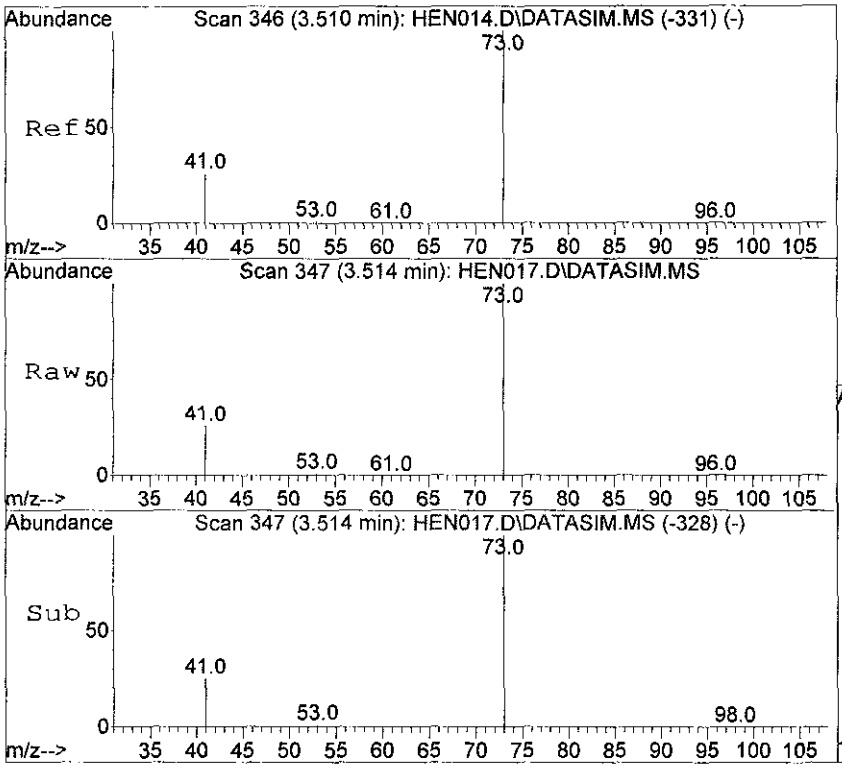


#3
1,1-Dichloroethene
Concen: 568.82 ppbv
RT: 3.132 min Scan# 269
Delta R.T. 0.000 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 61 Resp: 105088

Ion	Ratio	Lower	Upper
61	100		
96	54.9	43.8	65.6
63	31.3	25.1	37.7

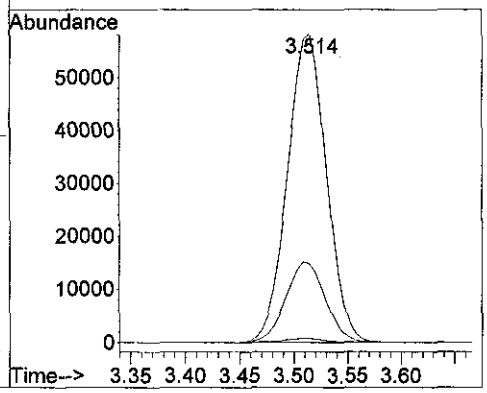


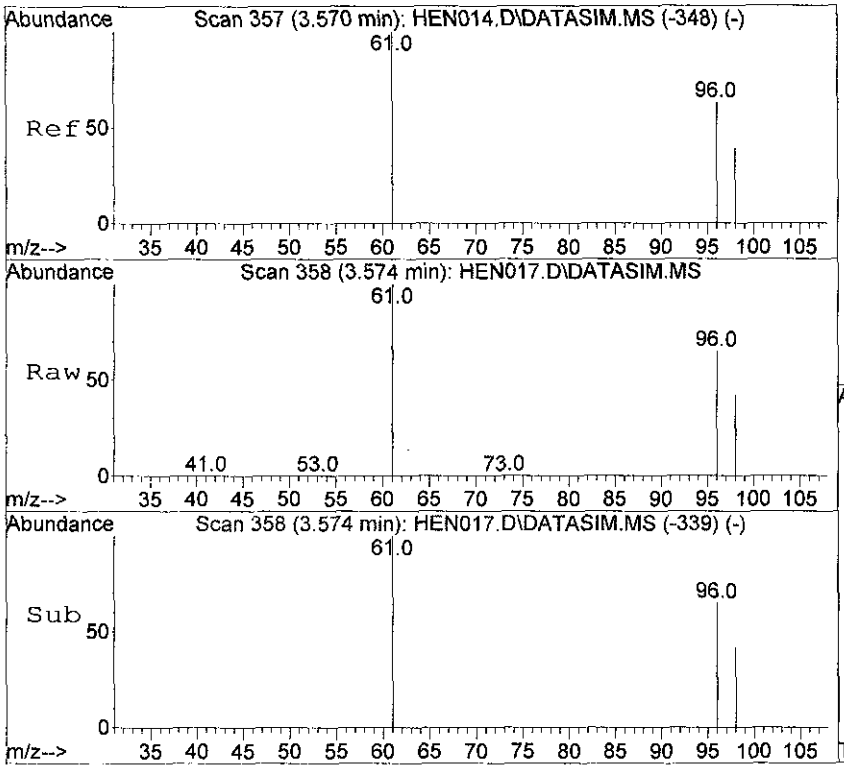


#4
Methyl Tert Butyl Ether
Concen: 531.06 ppbv
RT: 3.514 min Scan# 347
Delta R.T. 0.004 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 73 Resp: 145862

Ion	Ratio	Lower	Upper
73	100		
53	1.3	1.1	1.7
41	26.3	21.8	32.6

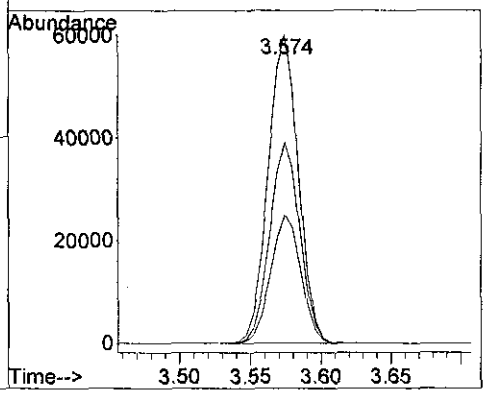


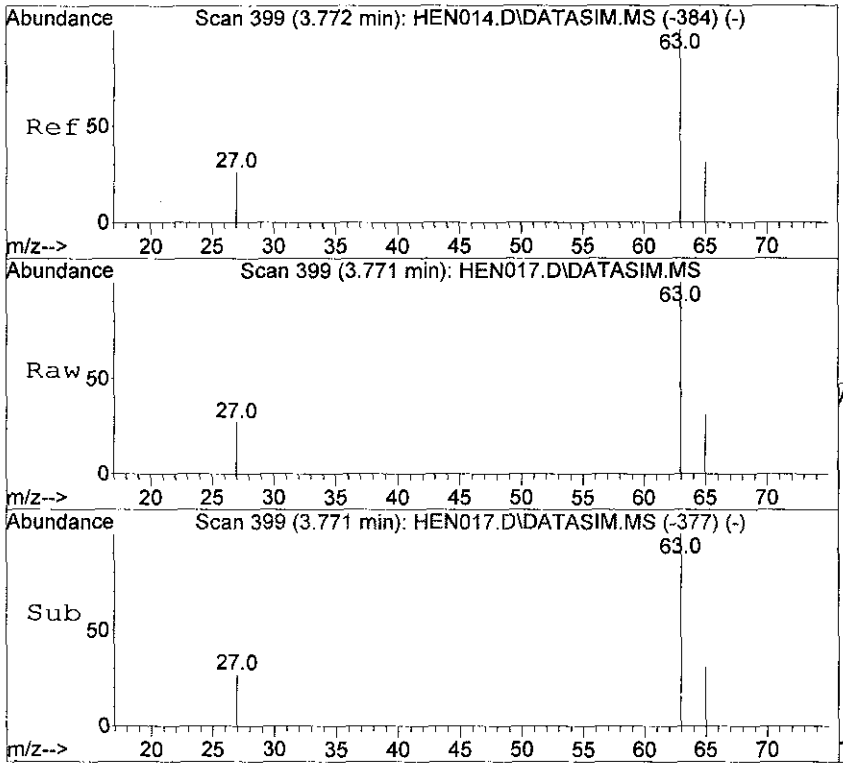


#5
trans-1,2-Dichloroethene
Concen: 543.38 ppbv
RT: 3.574 min Scan# 358
Delta R.T. 0.004 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 61 Resp: 89562

Ion	Ratio	Lower	Upper
61	100		
96	64.8	51.3	76.9
98	41.6	32.7	49.1

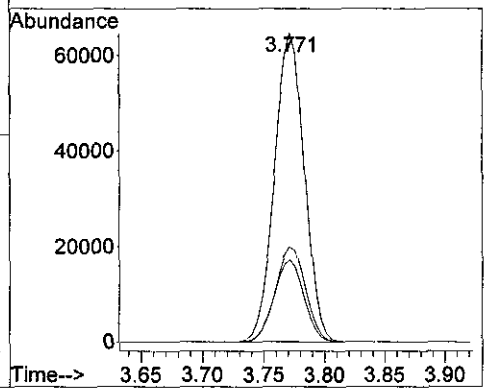


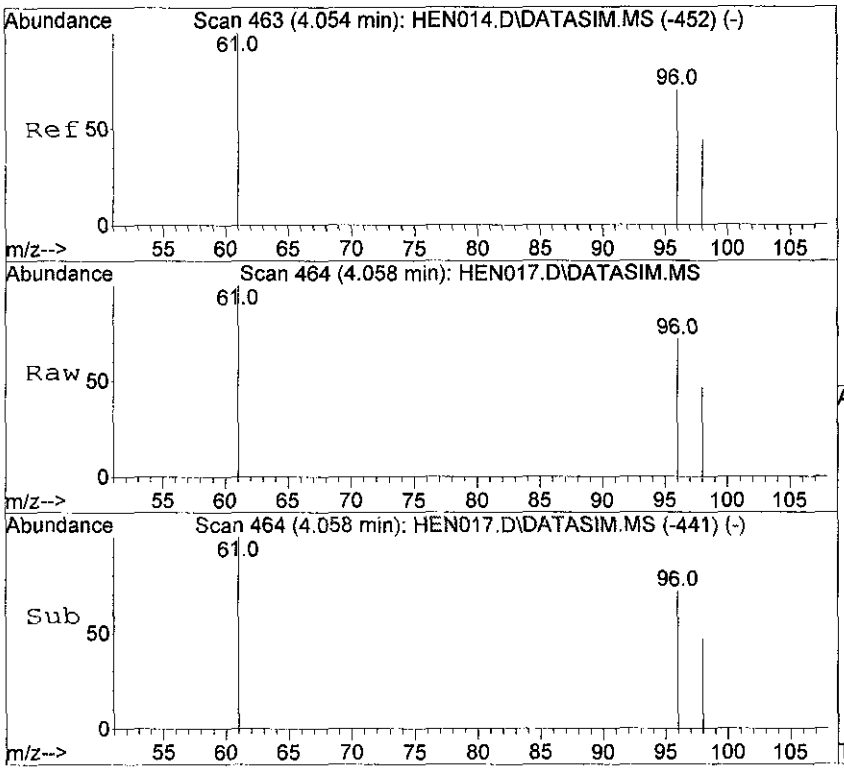


#6
1,1-Dichloroethane
Concen: 568.42 ppbv
RT: 3.771 min Scan# 399
Delta R.T. -0.001 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 63 Resp: 110810

Ion	Ratio	Lower	Upper
63	100		
65	31.0	24.7	37.1
27	26.6	22.0	33.0

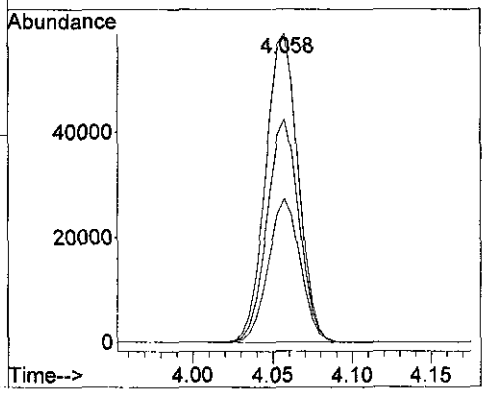


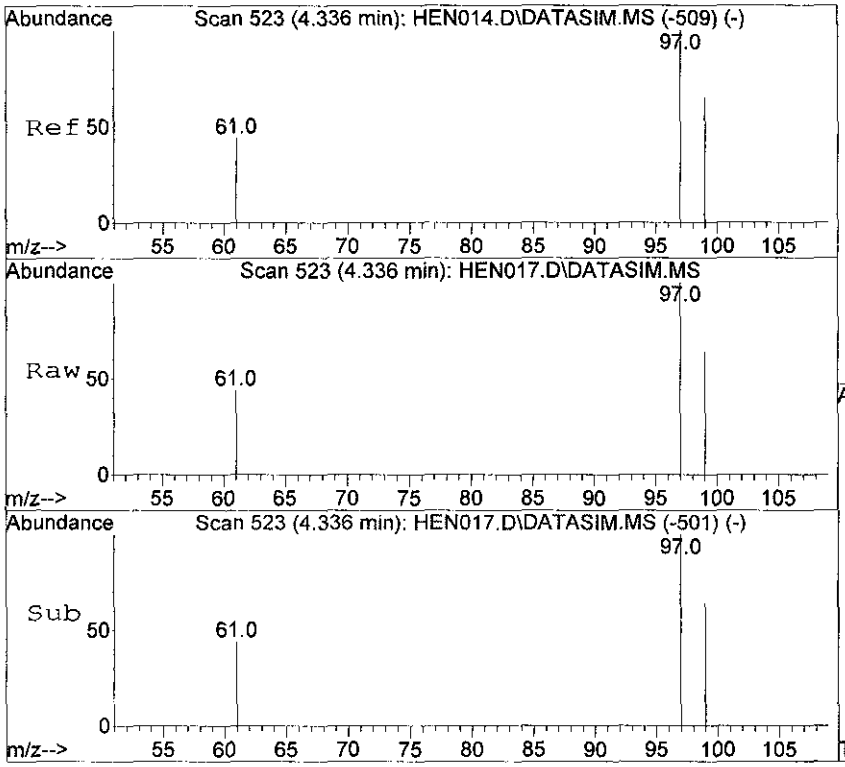


#7
cis-1,2-Dichloroethene
Concen: 532.59 ppbv
RT: 4.058 min Scan# 464
Delta R.T. 0.003 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 61 Resp: 83884

Ion	Ratio	Lower	Upper
61	100		
96	71.2	56.2	84.4
98	45.9	36.0	54.0

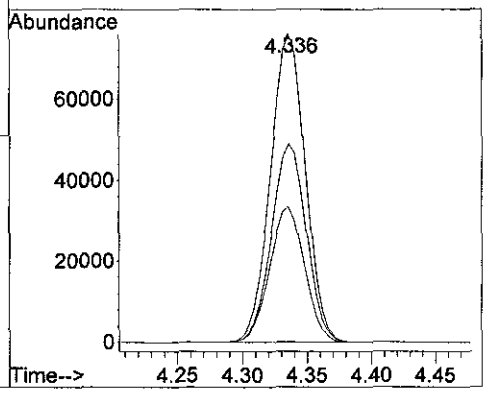


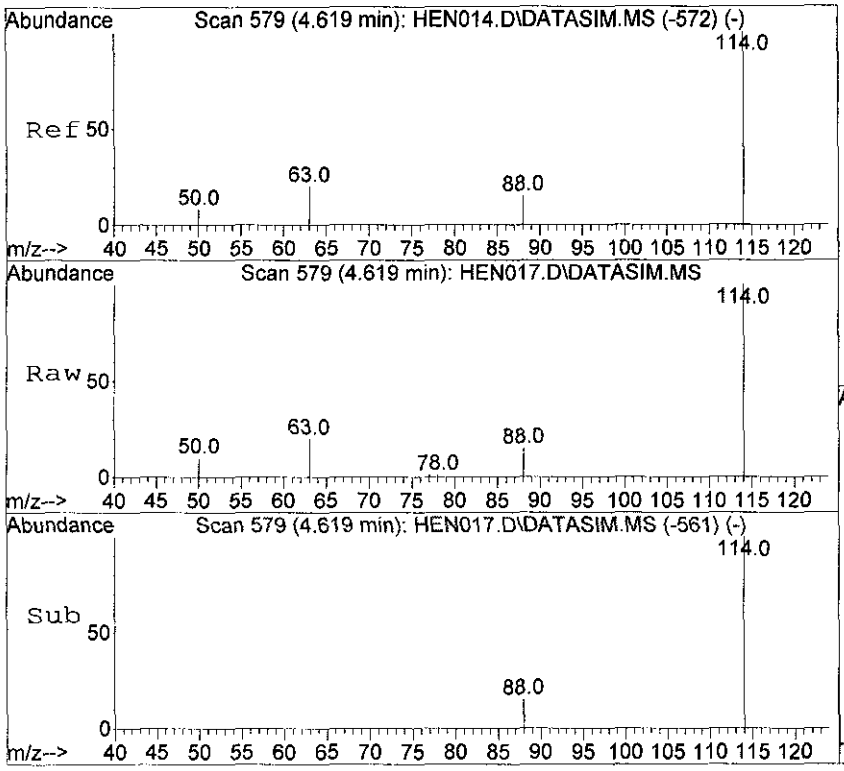


#8
1,1,1-Trichloroethane
Concen: 543.10 ppbv
RT: 4.336 min Scan# 523
Delta R.T. -0.000 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 97 Resp: 142732

Ion	Ratio	Lower	Upper
97	100		
99	64.4	51.5	77.3
61	43.9	35.8	53.8

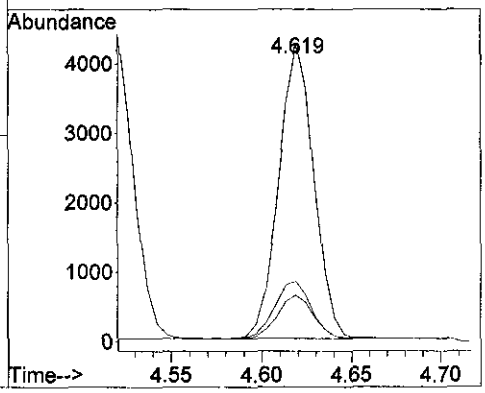


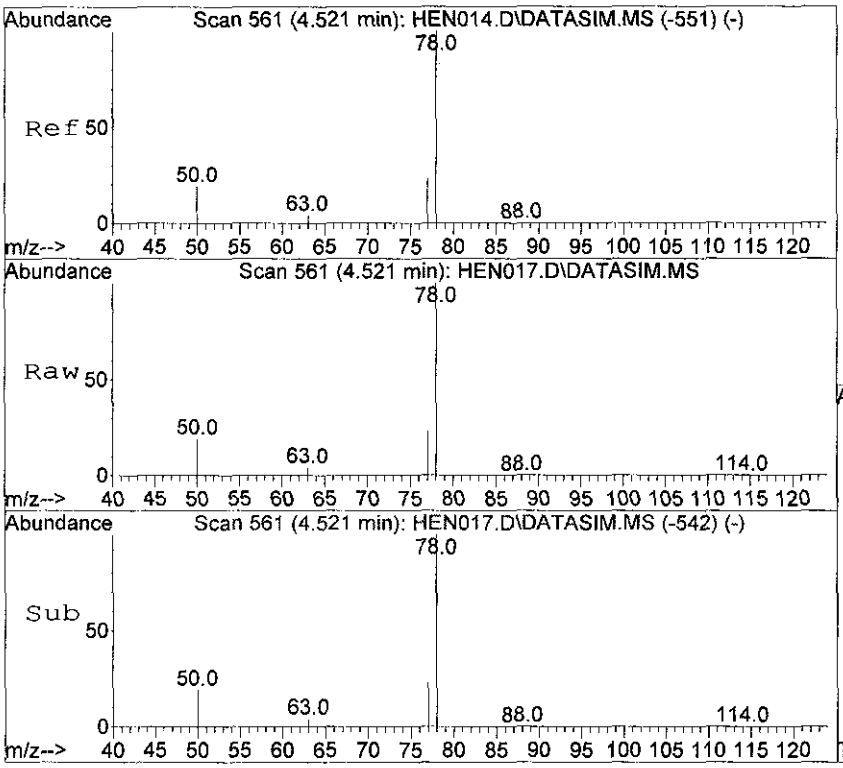


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. -0.000 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion:114 Resp: 5763

Ion	Ratio	Lower	Upper
114	100		
63	20.1	16.7	25.1
88	14.9	12.2	18.2

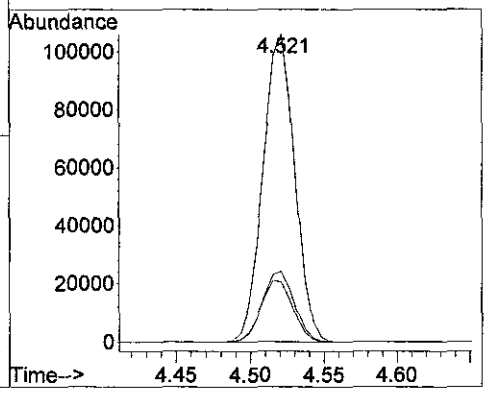


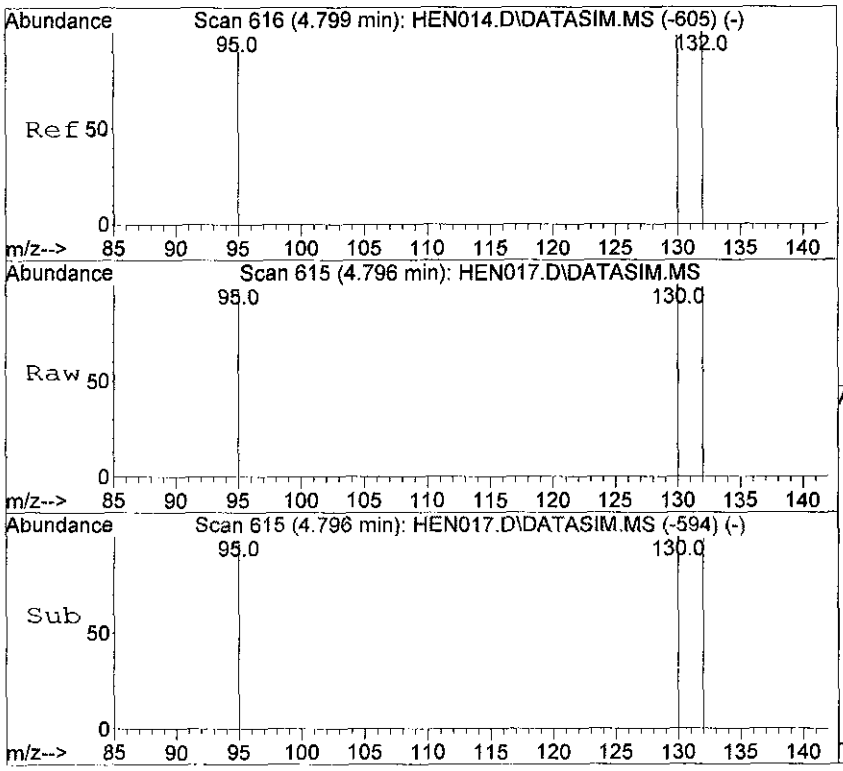


#10
Benzene
Concen: 540.57 ppbv
RT: 4.521 min Scan# 561
Delta R.T. -0.000 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 78 Resp: 158460

Ion	Ratio	Lower	Upper
78	100		
77	23.0	18.2	27.4
50	20.2	15.9	23.9

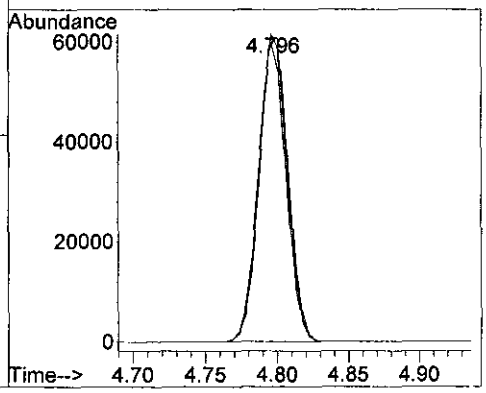


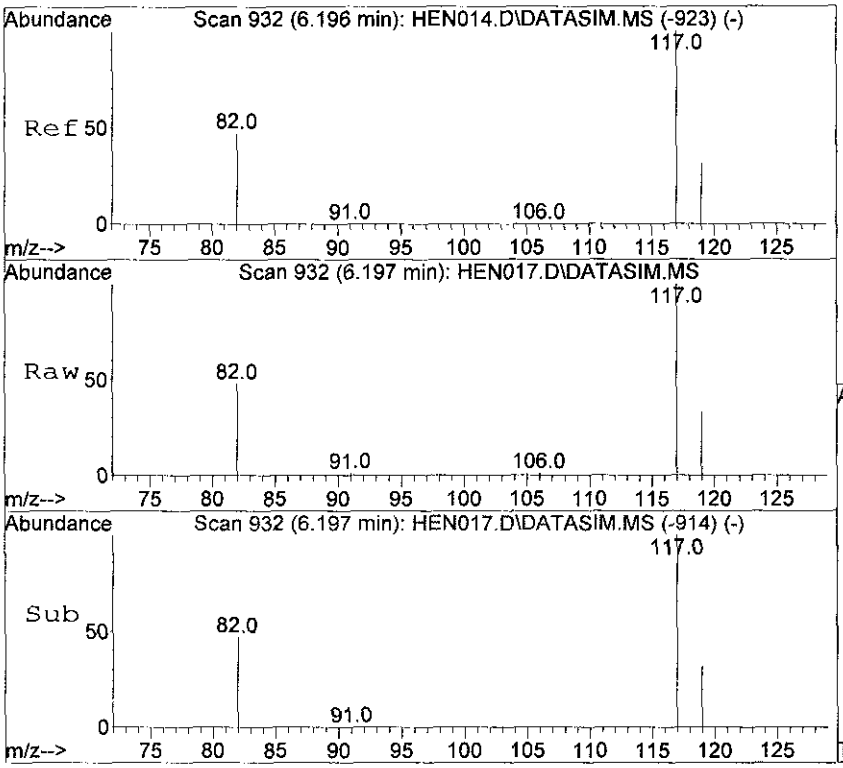


#11
Trichloroethene
Concen: 541.32 ppbv
RT: 4.796 min Scan# 615
Delta R.T. -0.004 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion:130 Resp: 83992

Ion	Ratio	Lower	Upper
130	100		
132	101.0	80.4	120.6
95	96.5	78.6	118.0

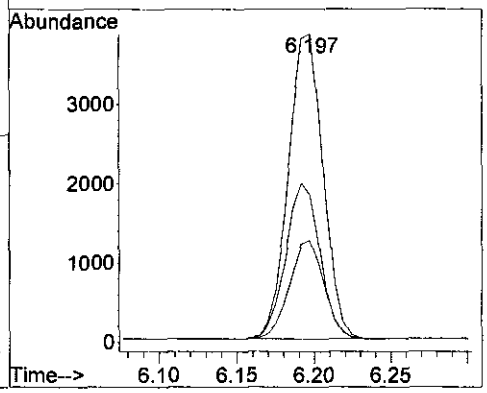


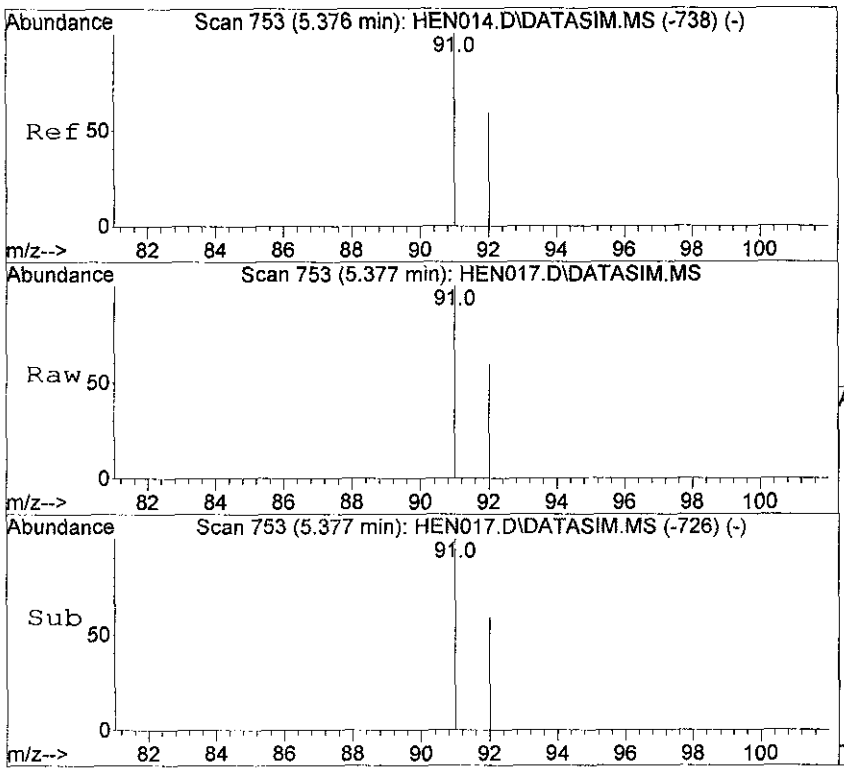


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion:117 Resp: 6037

Ion	Ratio	Lower	Upper
117	100		
82	50.0	41.4	62.0
119	31.9	25.8	38.6

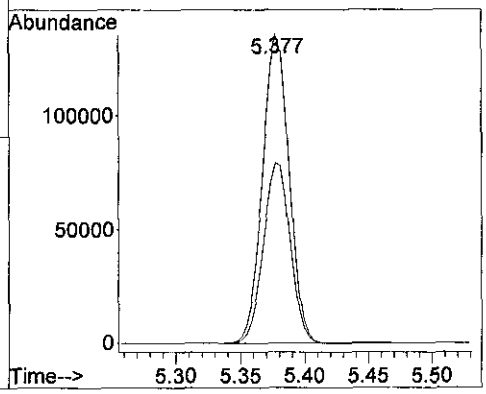


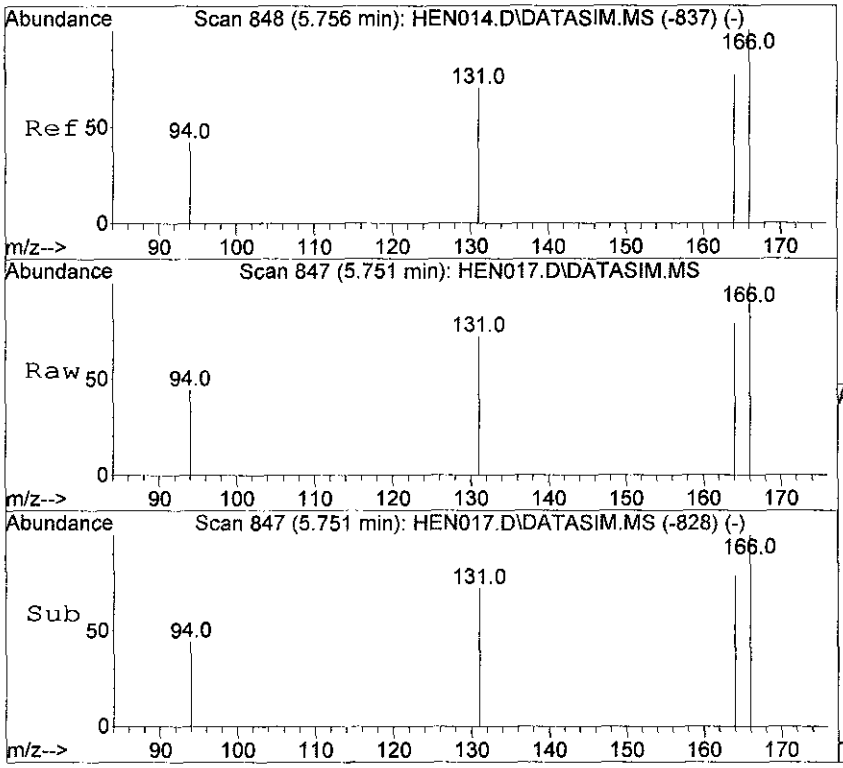


#13
Toluene
Concen: 523.47 ppbv
RT: 5.377 min Scan# 753
Delta R.T. 0.001 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 91 Resp: 194674

Ion	Ratio	Lower	Upper
91	100		
92	59.2	47.4	71.2

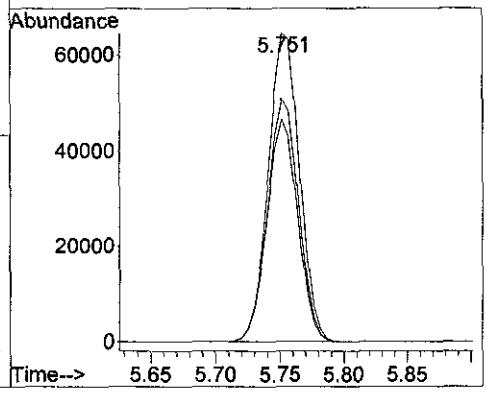


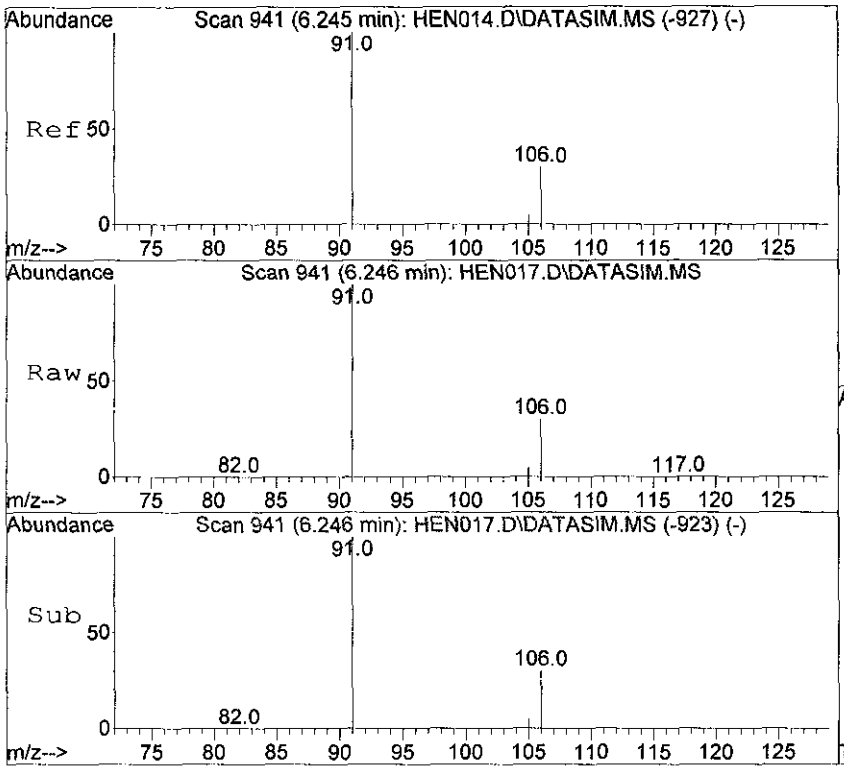


#14
Tetrachloroethene
Concen: 549.49 ppbv
RT: 5.751 min Scan# 847
Delta R.T. -0.004 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion:166 Resp: 109059

Ion	Ratio	Lower	Upper
166	100		
164	78.3	62.5	93.7
131	71.1	57.0	85.4

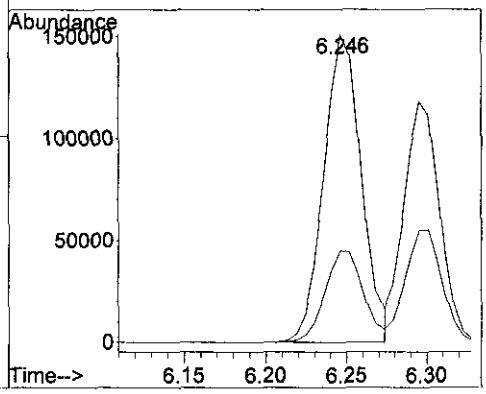


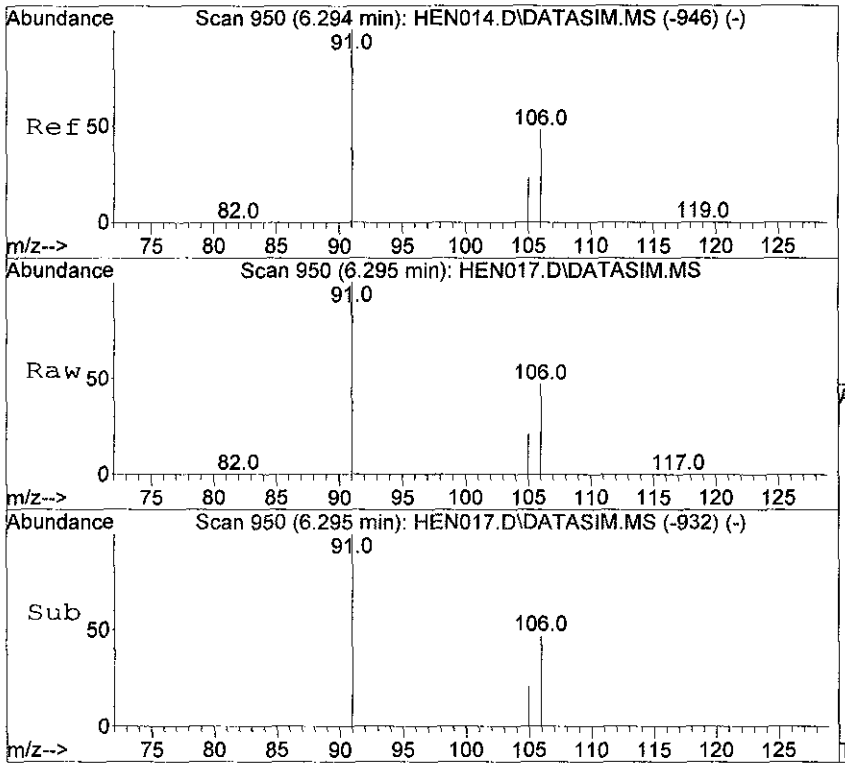


#15
Ethyl Benzene
Concen: 506.39 ppbv
RT: 6.246 min Scan# 941
Delta R.T. 0.001 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 91 Resp: 244935

Ion	Ratio	Lower	Upper
91	100		
106	29.9	23.9	35.9

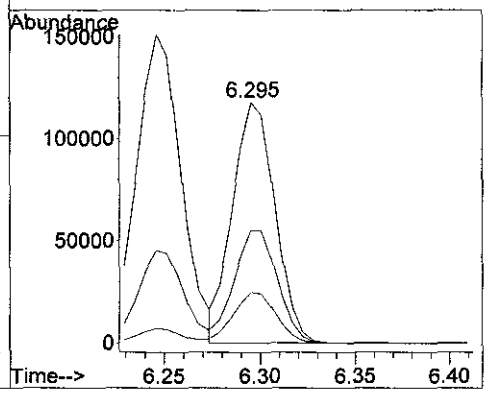


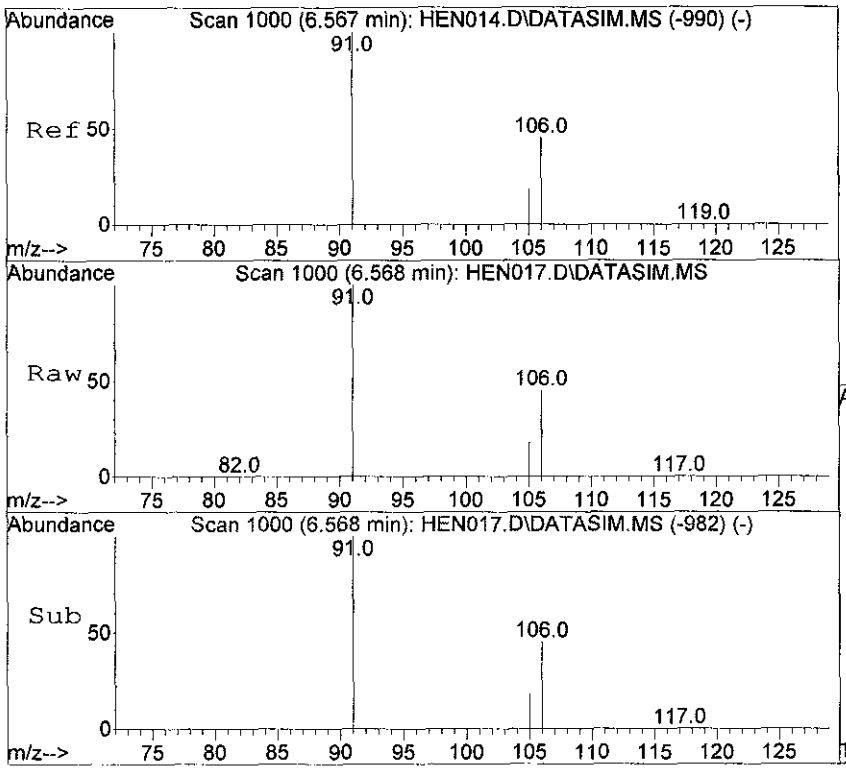


#16
m,p-Xylene
Concen: 486.24 ppbv
RT: 6.295 min Scan# 950
Delta R.T. 0.001 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 91 Resp: 181734

Ion	Ratio	Lower	Upper
91	100		
106	46.7	37.3	55.9
105	21.1	16.7	25.1

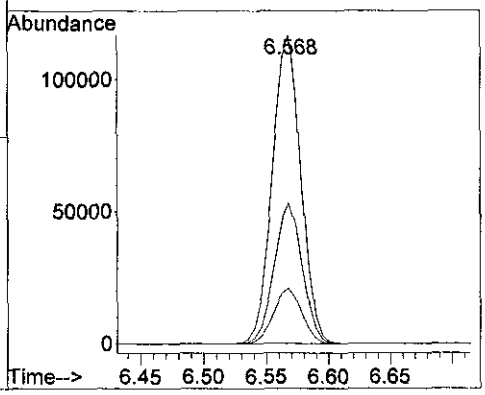




#17
o-Xylene
Concen: 493.05 ppbv
RT: 6.568 min Scan# 1000
Delta R.T. 0.001 min
Lab File: HEN017.D
Acq: 21 Mar 2012 12:09

Tgt Ion: 91 Resp: 186113

Ion	Ratio	Lower	Upper
91	100		
106	44.8	35.8	53.8
105	17.9	14.2	21.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN047.D
Acq On : 21 Mar 2012 21:16
Operator : SJT
Sample : 20120321-LCS \ 500ppbv LCS
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 21:25:25 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

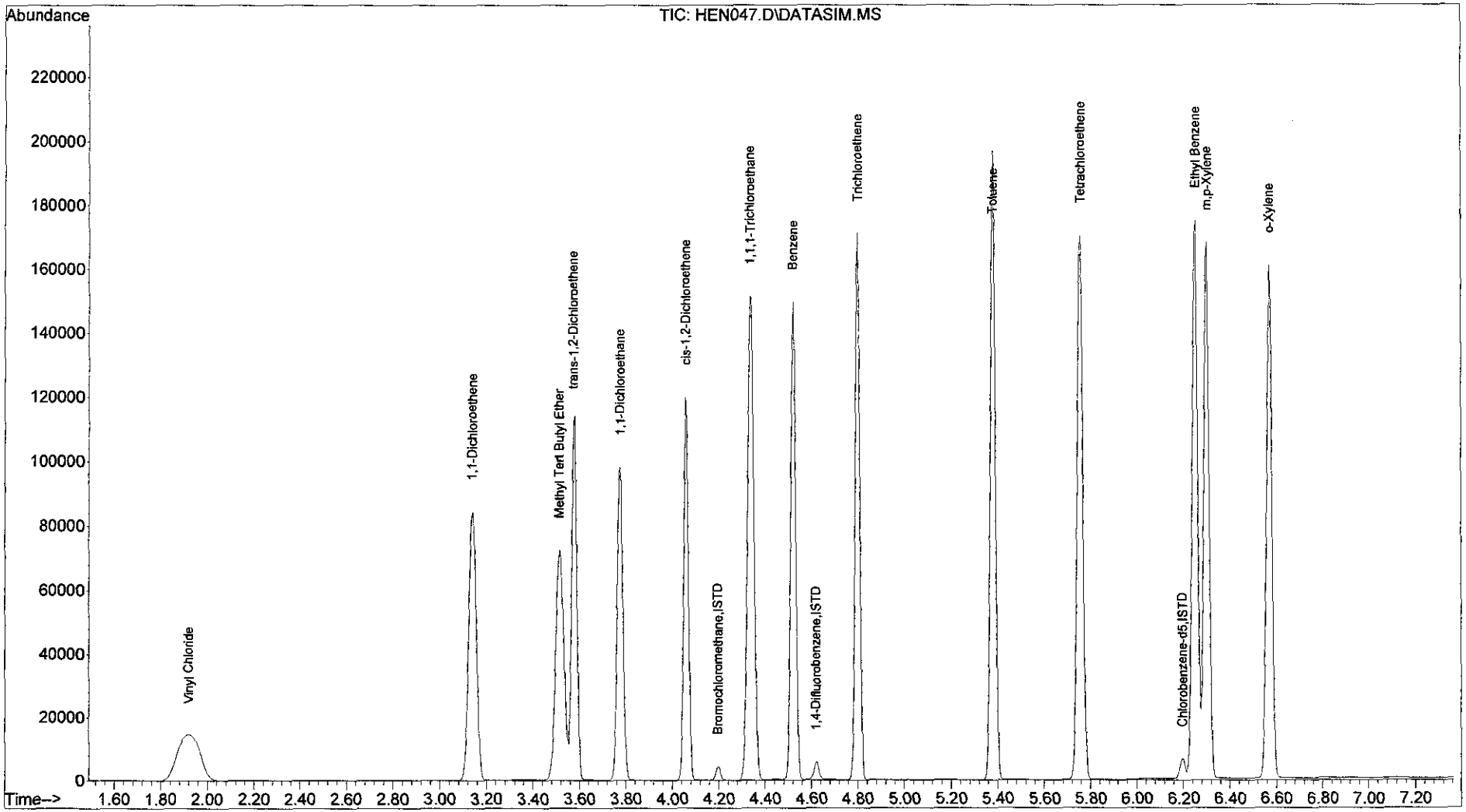
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.198	49	2324	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5362	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.197	117	5484m	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Vinyl Chloride	1.919	62	53405	550.37	ppbv	99
3) 1,1-Dichloroethene	3.140	61	101732	581.46	ppbv	100
4) Methyl Tert Butyl Ether	3.515	73	141975	545.82	ppbv	99
5) trans-1,2-Dichloroethene	3.575	61	85065	544.96	ppbv	99
6) 1,1-Dichloroethane	3.777	63	107289	581.15	ppbv	100
7) cis-1,2-Dichloroethene	4.059	61	79093	530.27	ppbv	99
8) 1,1,1-Trichloroethane	4.336	97	137386	552.00	ppbv	100
10) Benzene	4.521	78	150870	553.17	ppbv	100
11) Trichloroethene	4.800	130	78232	541.90	ppbv	99
13) Toluene	5.381	91	178051	527.05	ppbv	100
14) Tetrachloroethene	5.757	166	99256	550.52	ppbv	100
15) Ethyl Benzene	6.252	91	211525	481.42	ppbv	98
16) m,p-Xylene	6.301	91	155744	458.72	ppbv	98
17) o-Xylene	6.568	91	157145	458.28	ppbv	100

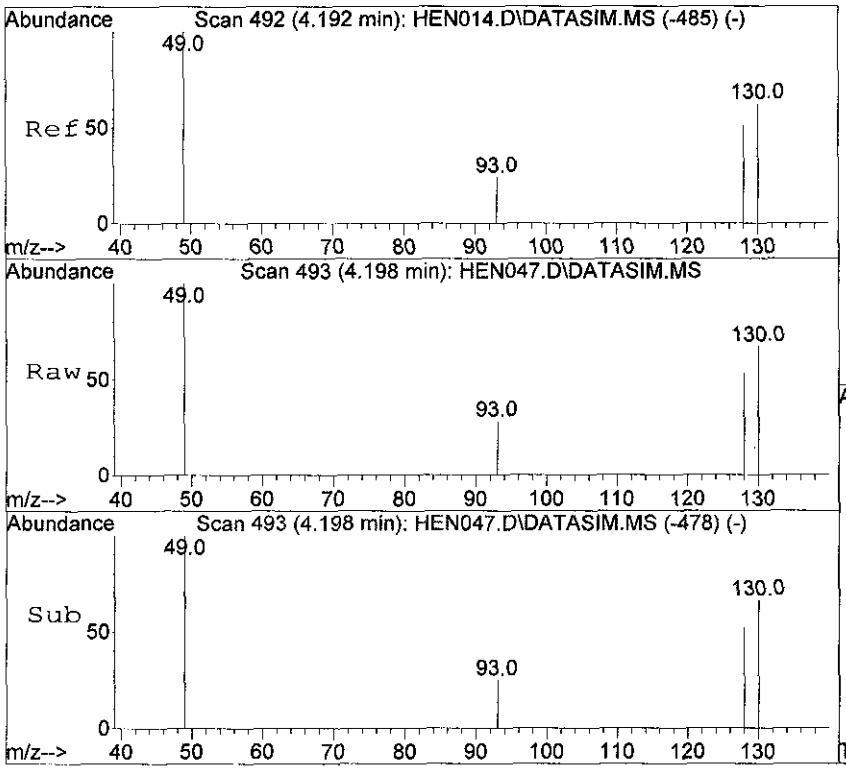
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN047.D
Acq On : 21 Mar 2012 21:16
Operator : SJT
Sample : 20120321-LCS \ 500ppbv LCS
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 21:25:25 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

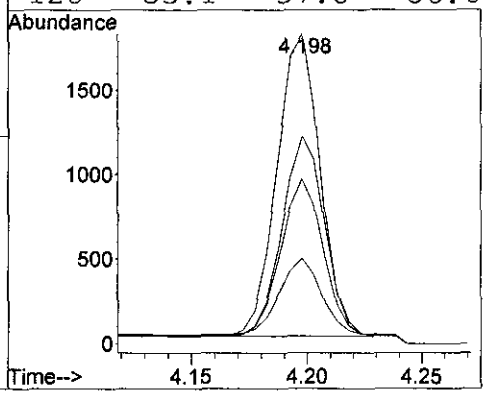


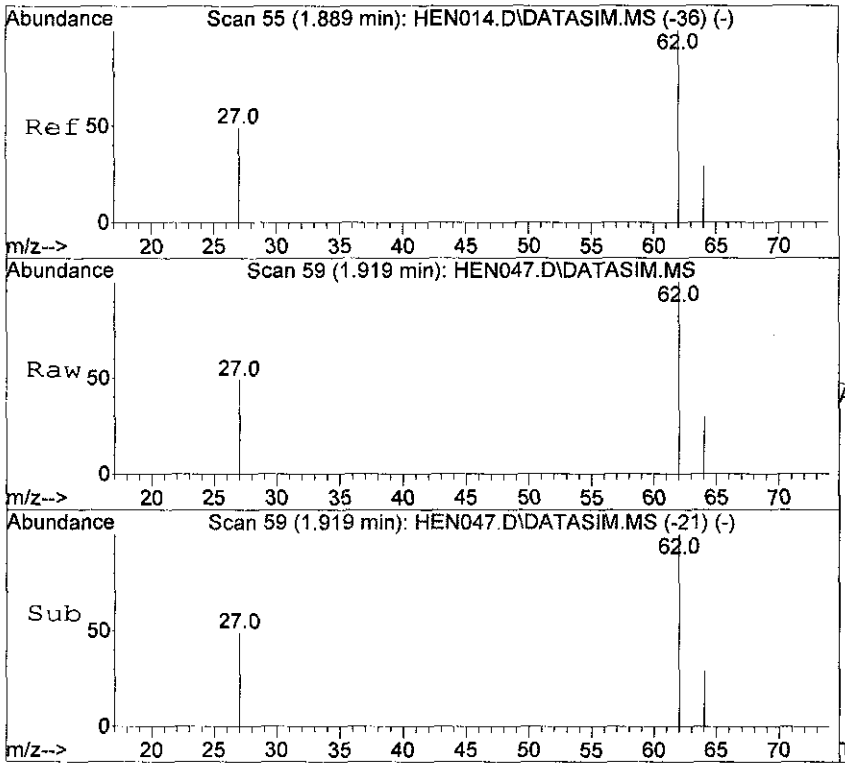


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.198 min Scan# 493
Delta R.T. 0.005 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 49 Resp: 2324

Ion	Ratio	Lower	Upper
49	100		
130	66.9	46.5	69.7
93	27.5	19.0	28.6
128	53.1	37.8	56.6

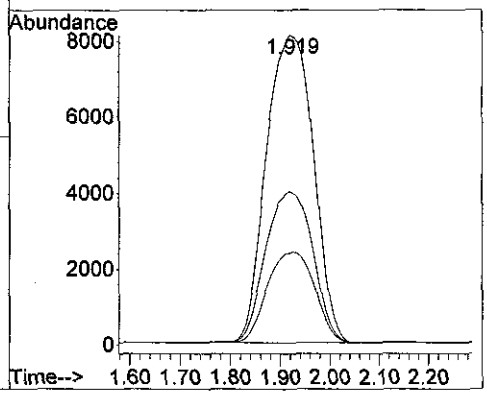


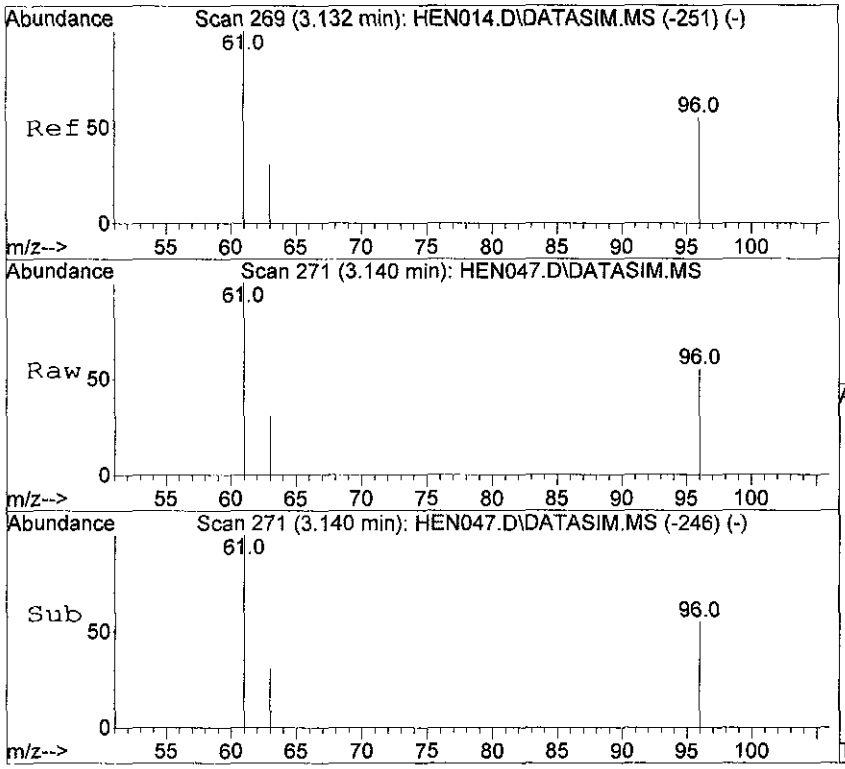


#2
Vinyl Chloride
Concen: 550.37 ppbv
RT: 1.919 min Scan# 59
Delta R.T. 0.030 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 62 Resp: 53405

Ion	Ratio	Lower	Upper
62	100		
64	29.6	23.7	35.5
27	49.0	39.8	59.8

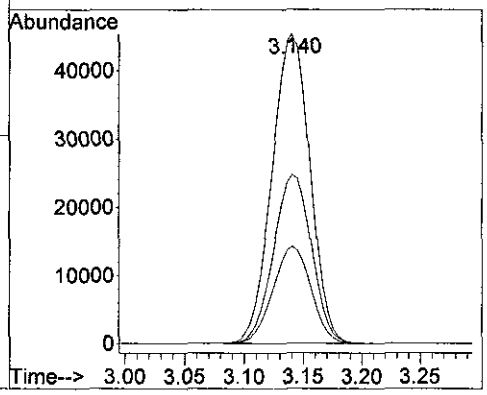


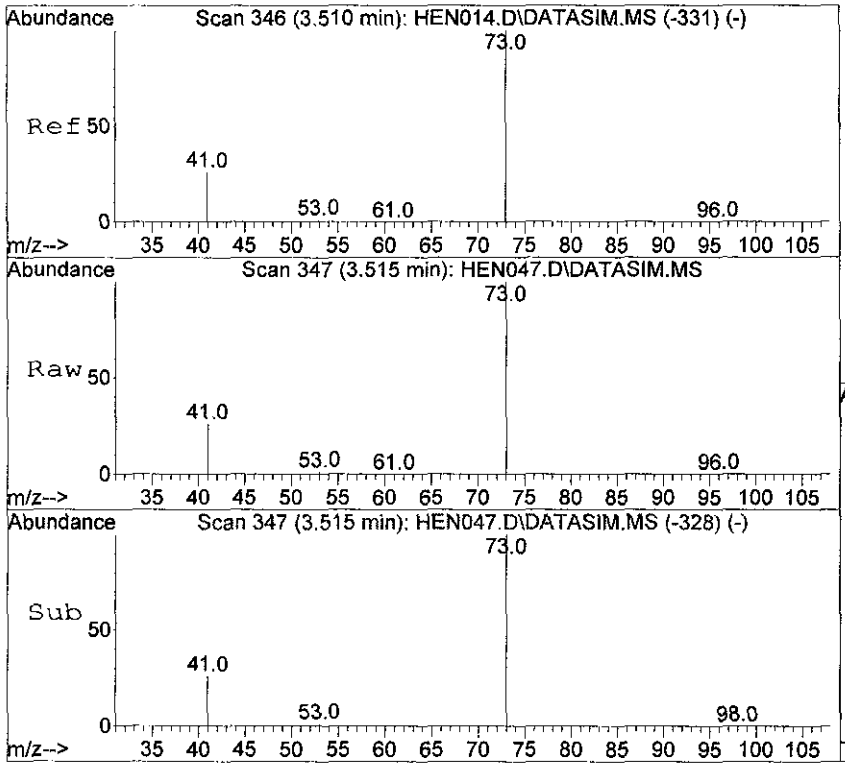


#3
1,1-Dichloroethene
Concen: 581.46 ppbv
RT: 3.140 min Scan# 271
Delta R.T. 0.009 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 61 Resp: 101732

Ion	Ratio	Lower	Upper
61	100		
96	54.6	43.8	65.6
63	31.3	25.1	37.7

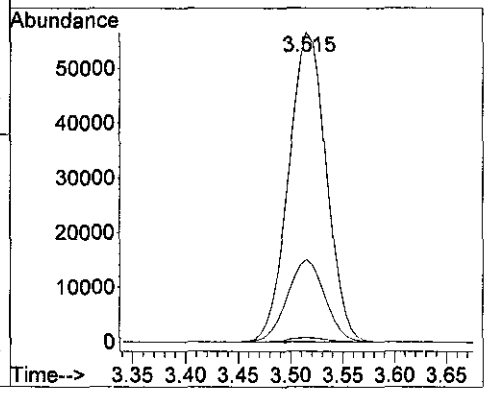


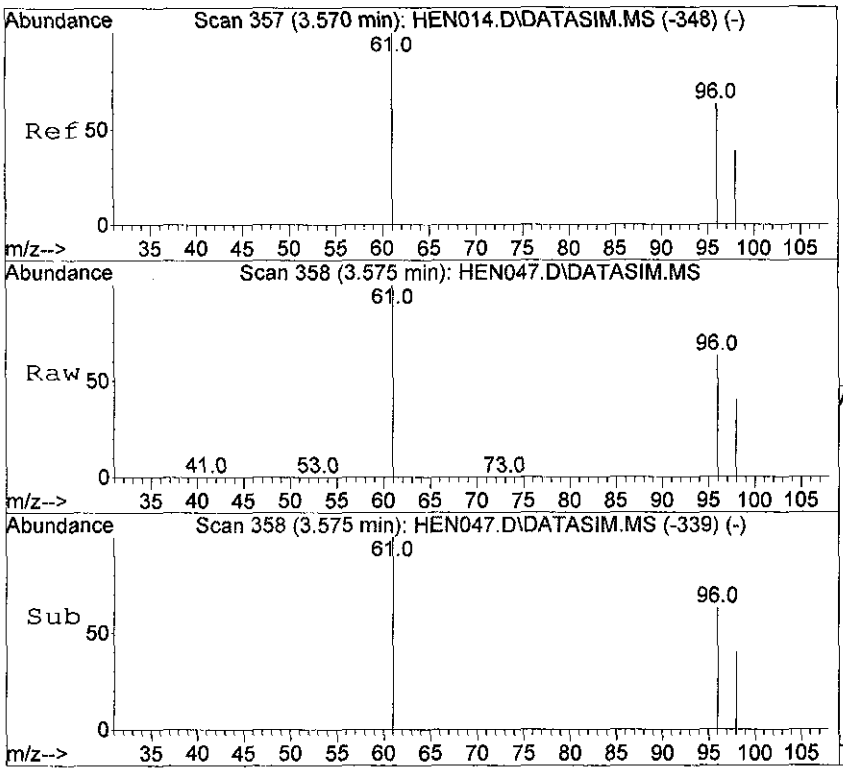


#4
Methyl Tert Butyl Ether
Concen: 545.82 ppbv
RT: 3.515 min Scan# 347
Delta R.T. 0.006 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 73 Resp: 141975

Ion	Ratio	Lower	Upper
73	100		
53	1.4	1.1	1.7
41	26.5	21.8	32.6

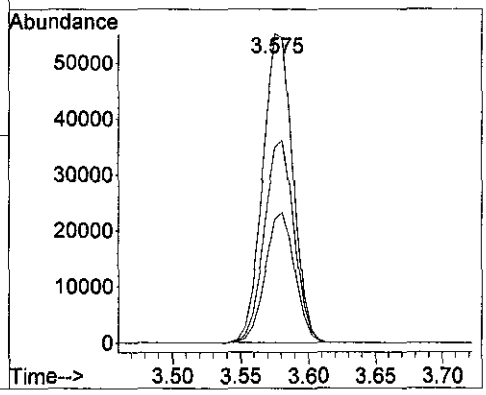


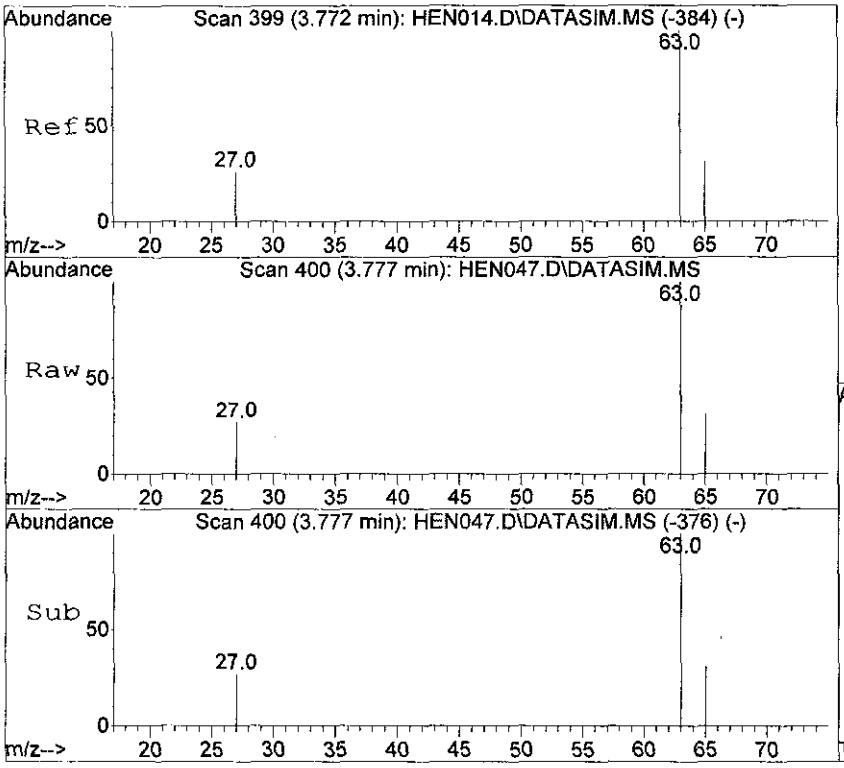


#5
trans-1,2-Dichloroethene
Concen: 544.96 ppbv
RT: 3.575 min Scan# 358
Delta R.T. 0.006 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 61 Resp: 85065

Ion	Ratio	Lower	Upper
61	100		
96	64.7	51.3	76.9
98	41.3	32.7	49.1

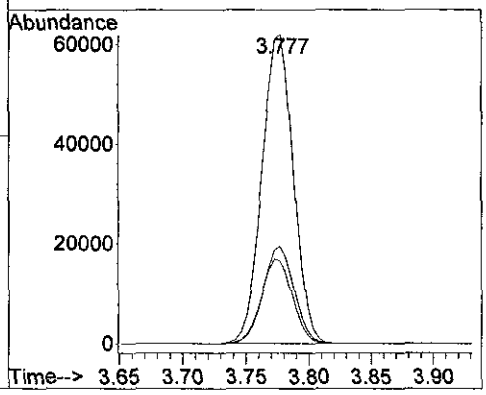


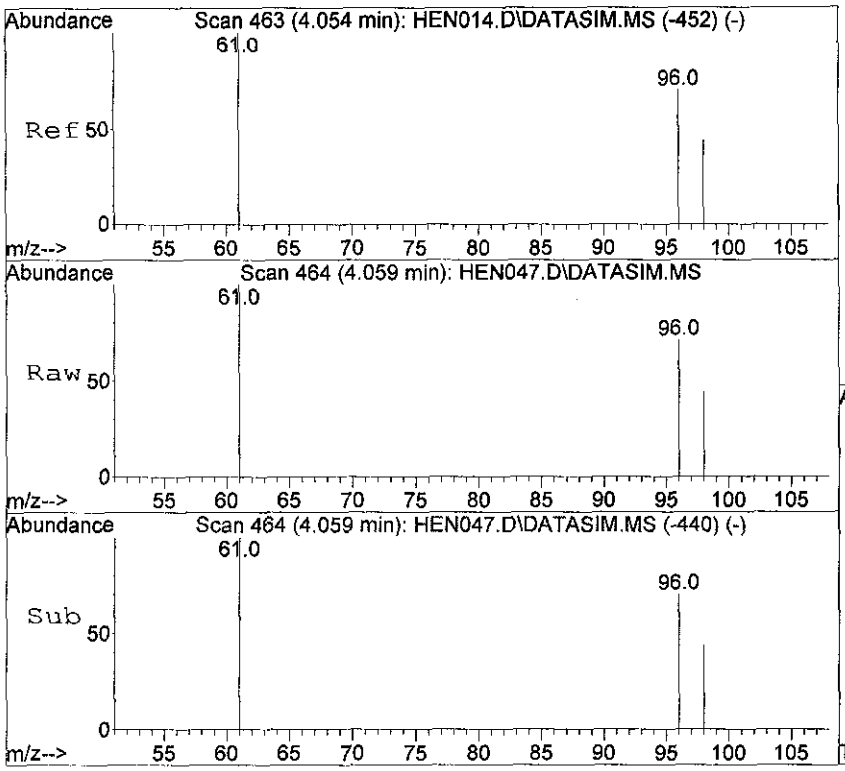


#6
1,1-Dichloroethane
Concen: 581.15 ppbv
RT: 3.777 min Scan# 400
Delta R.T. 0.004 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 63 Resp: 107289

Ion	Ratio	Lower	Upper
63	100		
65	31.0	24.7	37.1
27	27.1	22.0	33.0

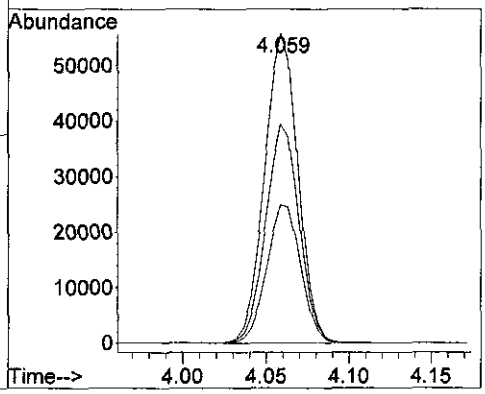


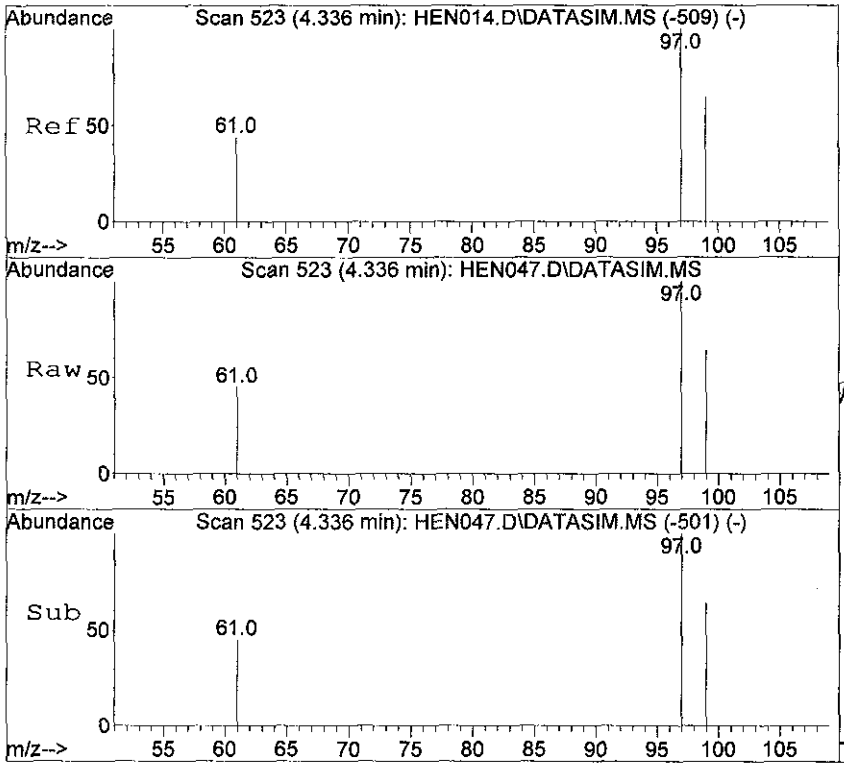


#7
cis-1,2-Dichloroethene
Concen: 530.27 ppbv
RT: 4.059 min Scan# 464
Delta R.T. 0.004 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 61 Resp: 79093

Ion	Ratio	Lower	Upper
61	100		
96	70.6	56.2	84.4
98	45.5	36.0	54.0

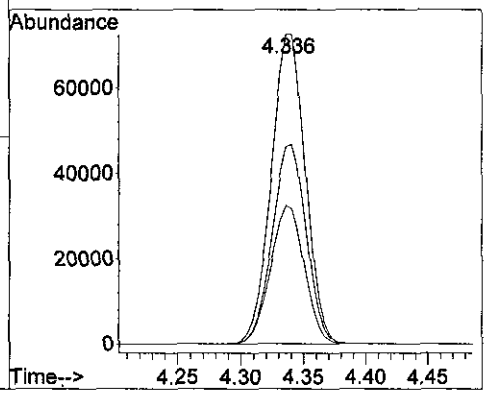


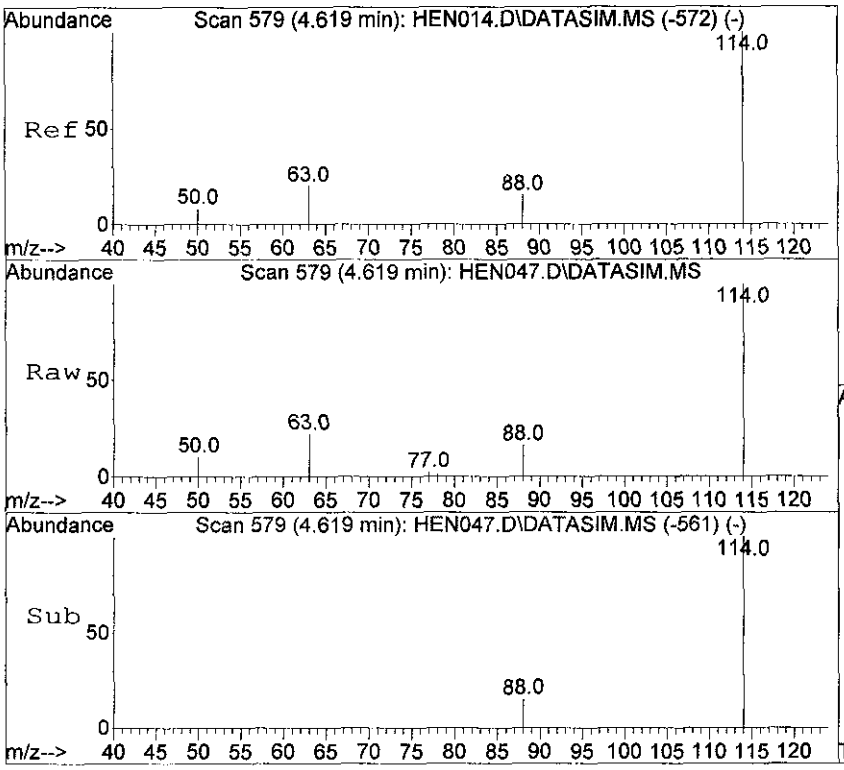


#8
1,1,1-Trichloroethane
Concen: 552.00 ppbv
RT: 4.336 min Scan# 523
Delta R.T. 0.000 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 97 Resp: 137386

Ion	Ratio	Lower	Upper
97	100		
99	64.4	51.5	77.3
61	44.5	35.8	53.8

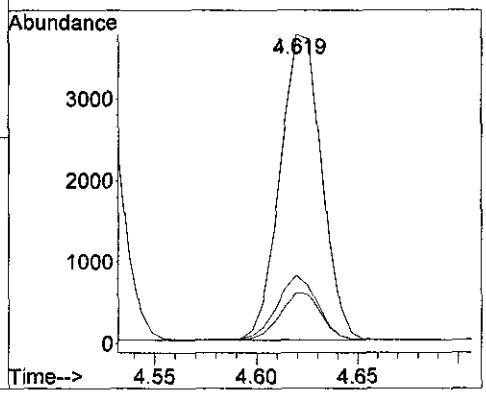


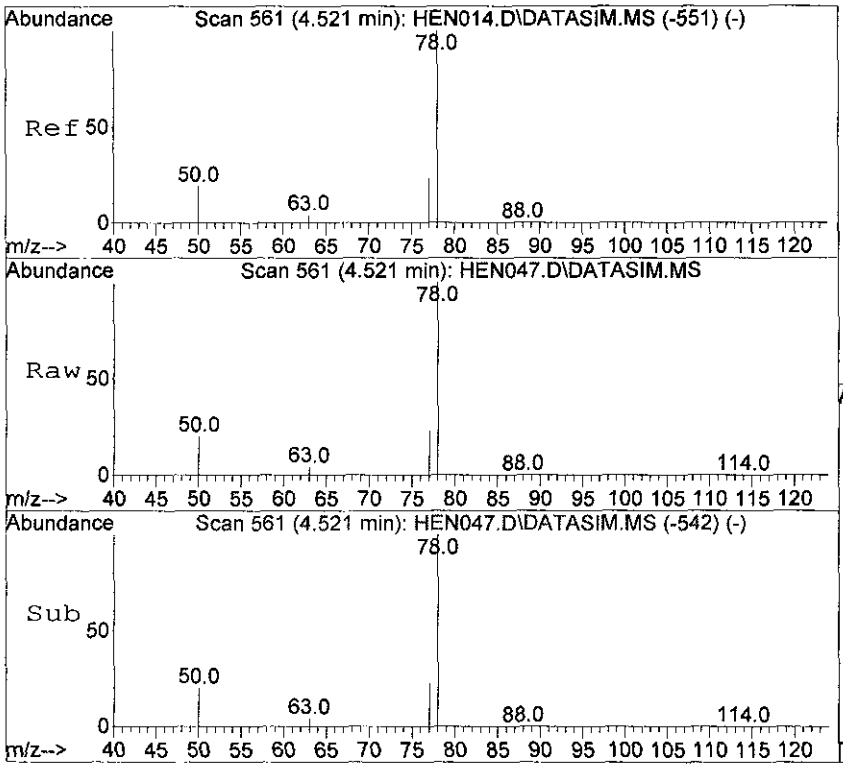


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion:114 Resp: 5362

Ion	Ratio	Lower	Upper
114	100		
63	20.3	16.7	25.1
88	15.2	12.2	18.2

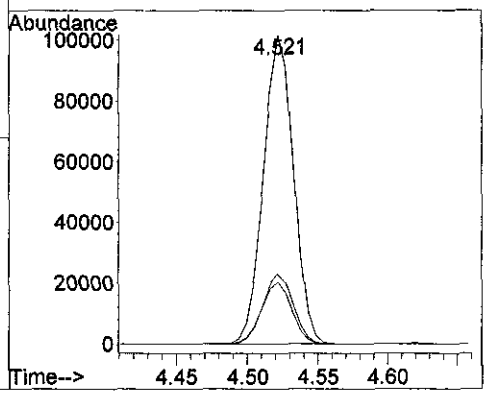


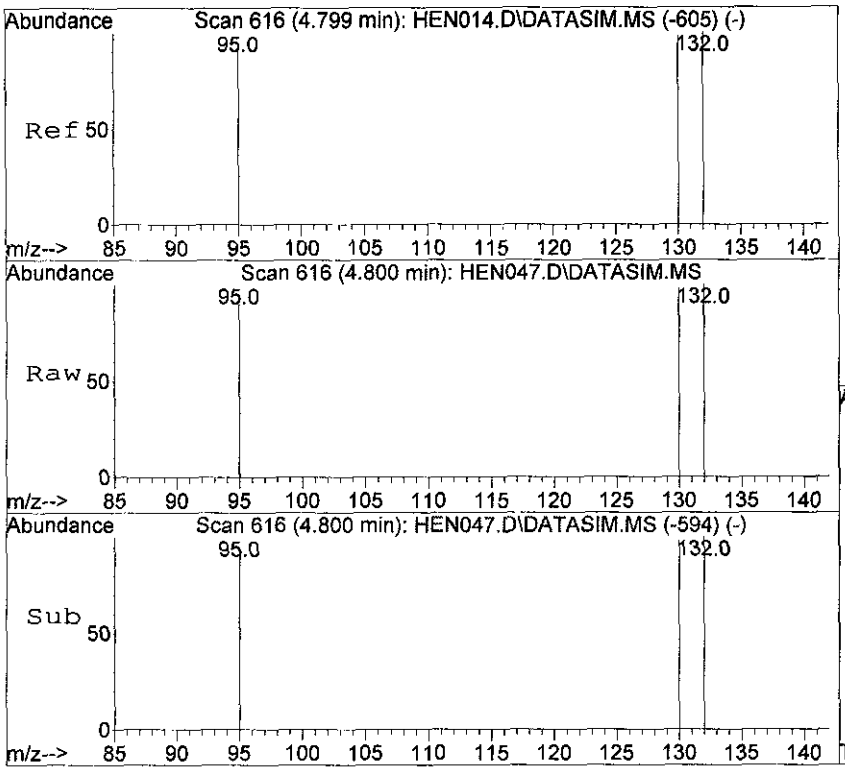


#10
Benzene
Concen: 553.17 ppbv
RT: 4.521 min Scan# 561
Delta R.T. 0.000 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 78 Resp: 150870

Ion	Ratio	Lower	Upper
78	100		
77	22.9	18.2	27.4
50	20.1	15.9	23.9

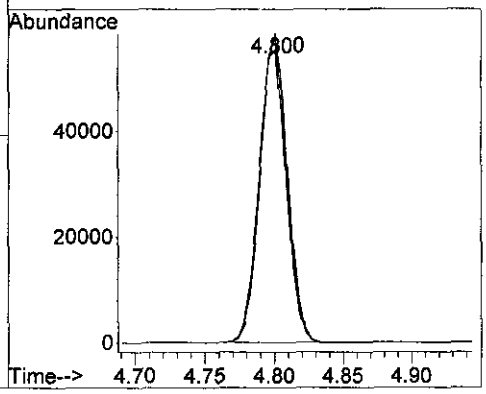


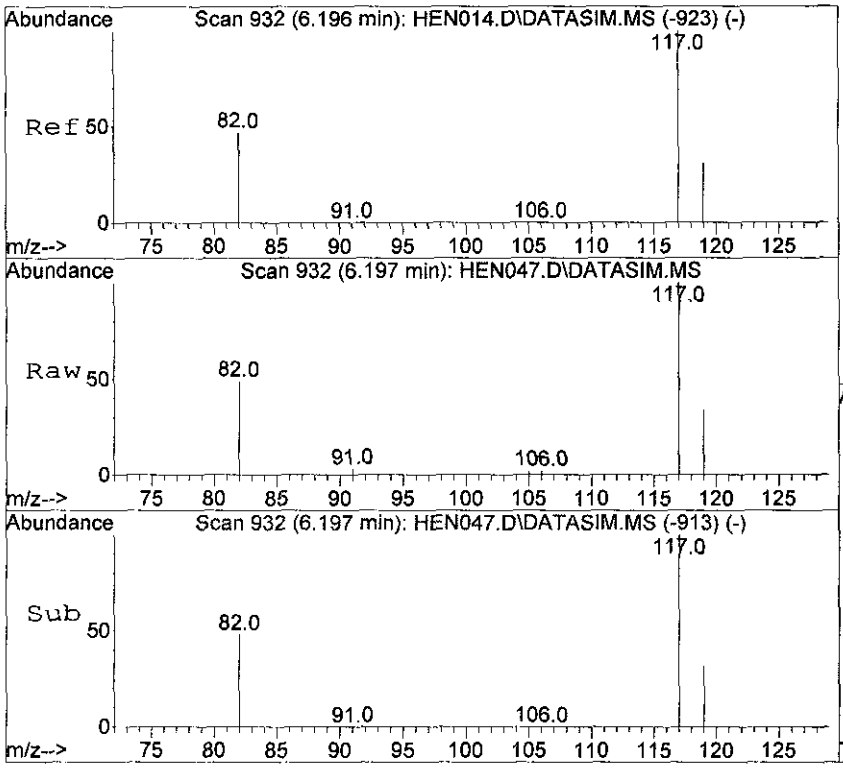


#11
Trichloroethene
Concen: 541.90 ppbv
RT: 4.800 min Scan# 616
Delta R.T. 0.001 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion:130 Resp: 78232

Ion	Ratio	Lower	Upper
130	100		
132	100.9	80.4	120.6
95	97.4	78.6	118.0

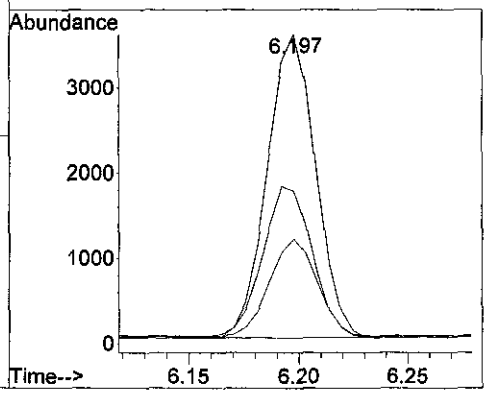


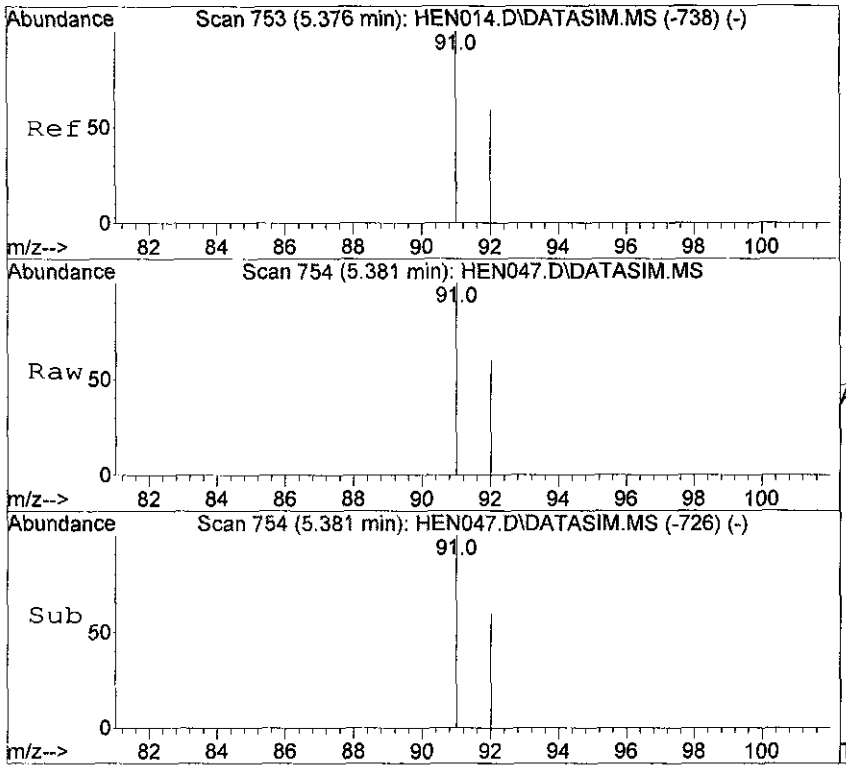


#12
Chlorobenzene-d5
Concen: 10.00 ppbv m
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion:117 Resp: 5484

Ion	Ratio	Lower	Upper
117	100		
82	51.0	41.4	62.0
119	32.4	25.8	38.6

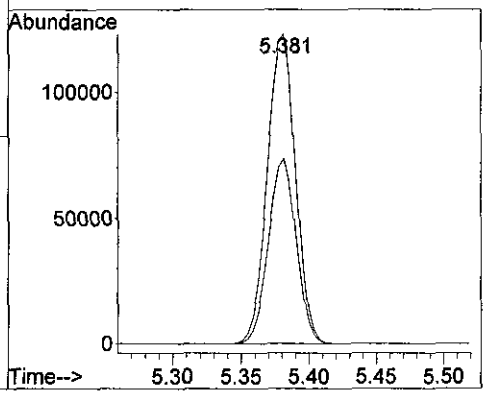


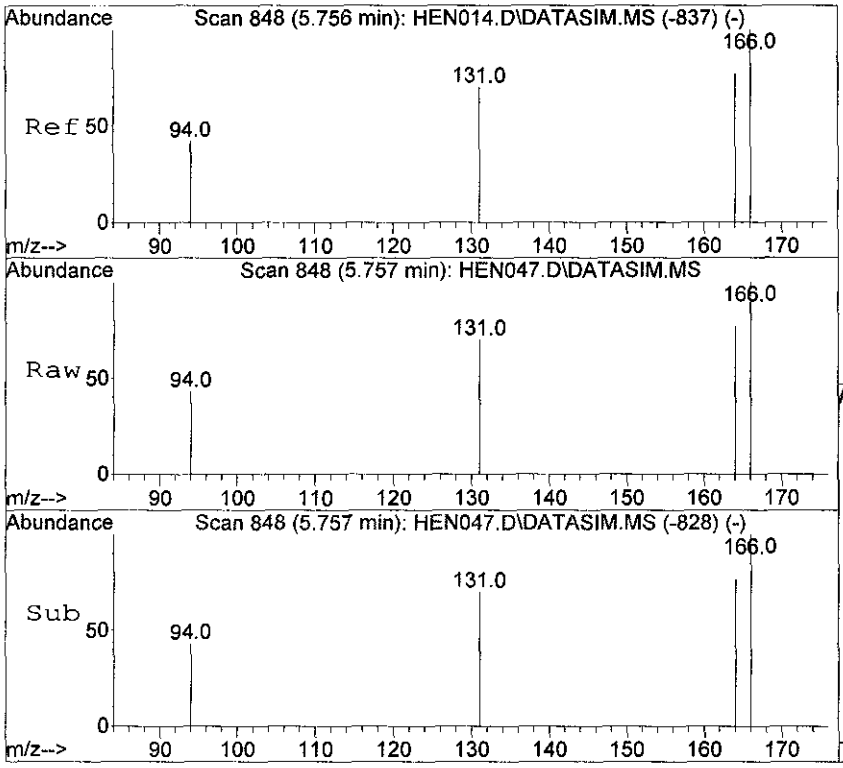


#13
Toluene
Concen: 527.05 ppbv
RT: 5.381 min Scan# 754
Delta R.T. 0.005 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 91 Resp: 178051

Ion	Ratio	Lower	Upper
91	100		
92	59.3	47.4	71.2

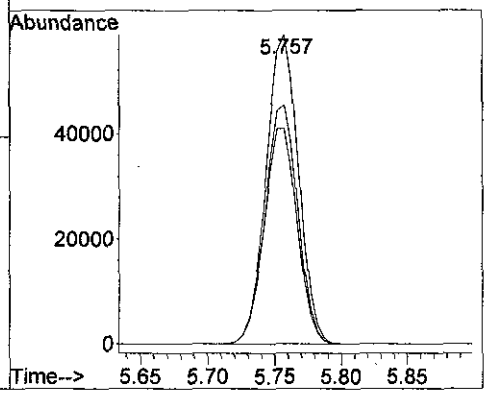


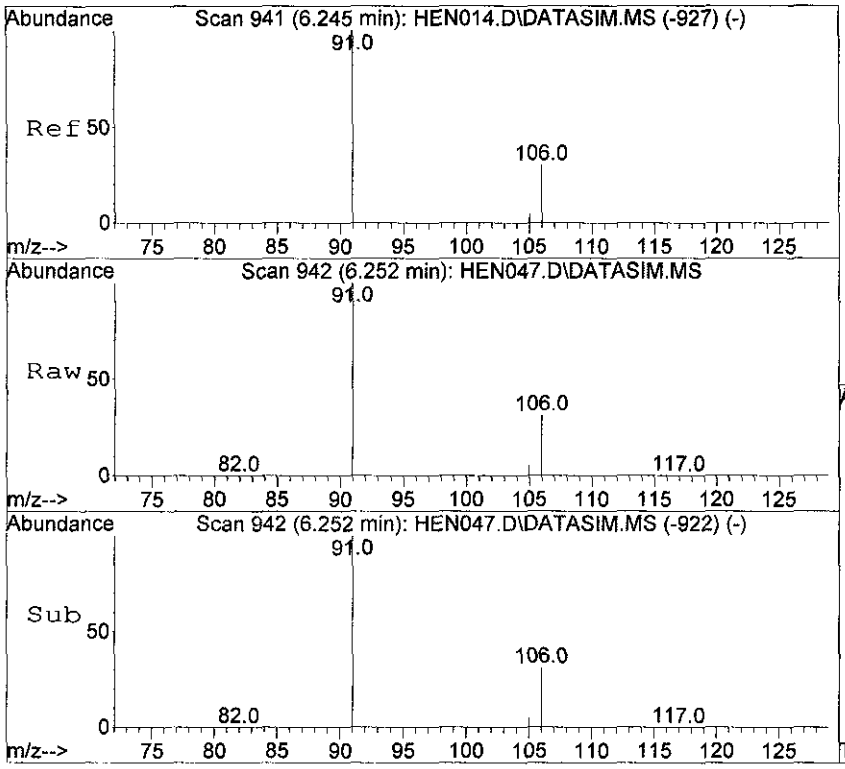


#14
Tetrachloroethene
Concen: 550.52 ppbv
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion:166 Resp: 99256

Ion	Ratio	Lower	Upper
166	100		
164	78.1	62.5	93.7
131	70.9	57.0	85.4

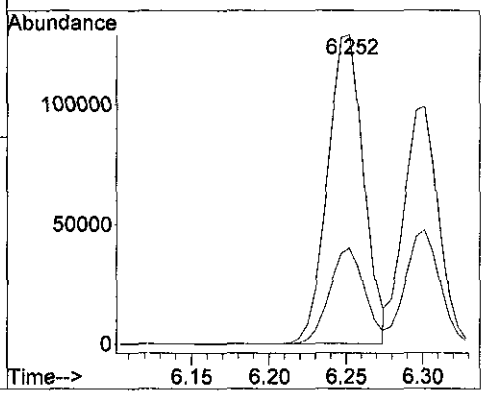


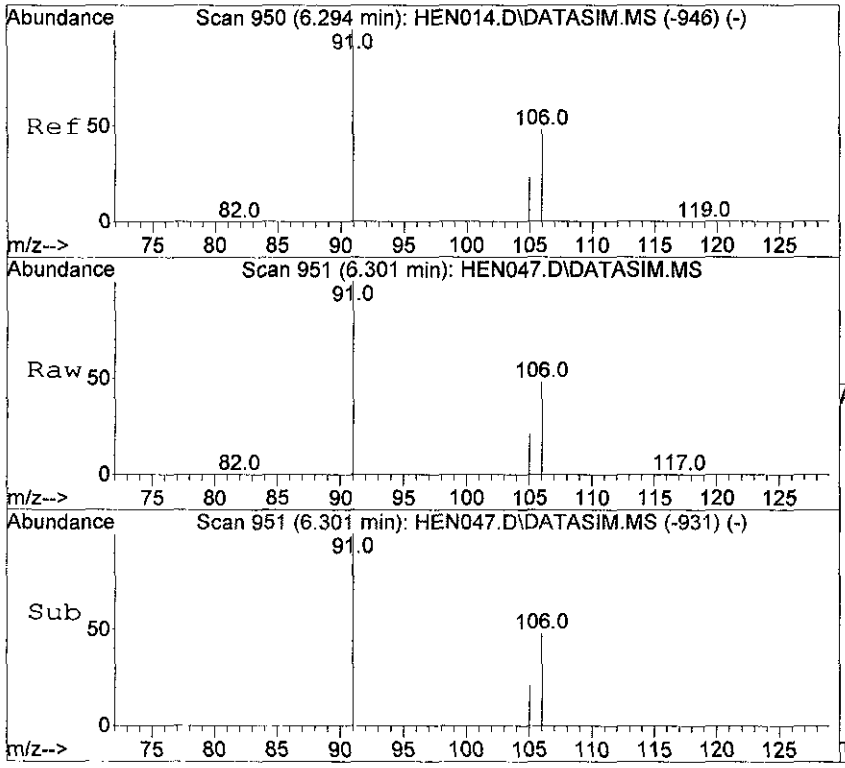


#15
Ethyl Benzene
Concen: 481.42 ppbv
RT: 6.252 min Scan# 942
Delta R.T. 0.007 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 91 Resp: 211525

Ion	Ratio	Lower	Upper
91	100		
106	31.0	23.9	35.9

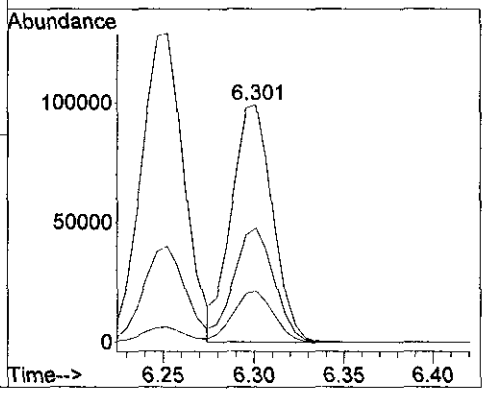


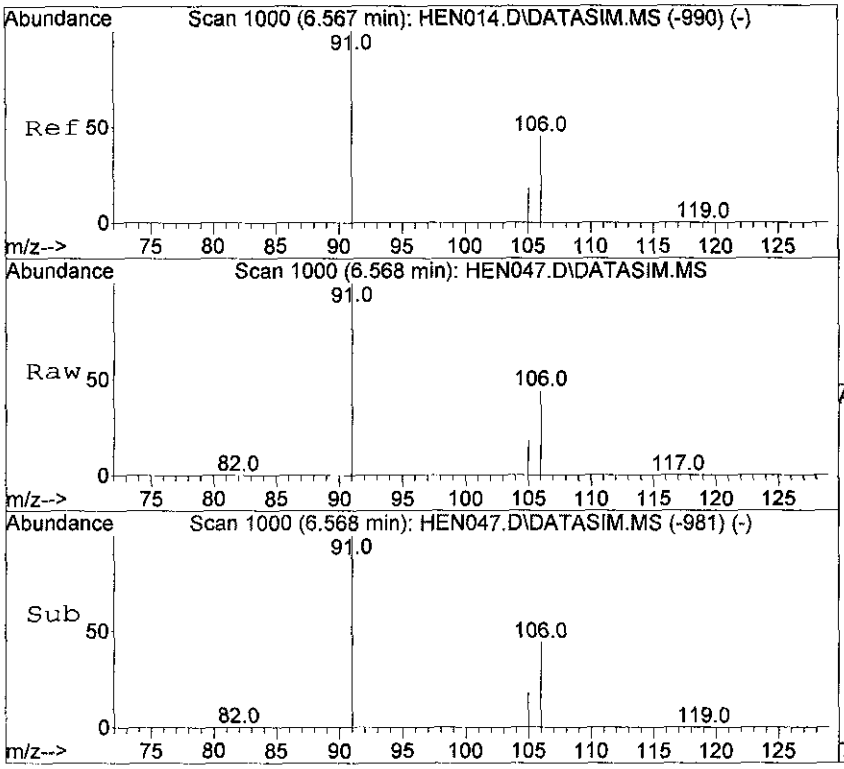


#16
m,p-Xylene
Concen: 458.72 ppbv
RT: 6.301 min Scan# 951
Delta R.T. 0.007 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 91 Resp: 155744

Ion	Ratio	Lower	Upper
91	100		
106	48.1	37.3	55.9
105	21.4	16.7	25.1

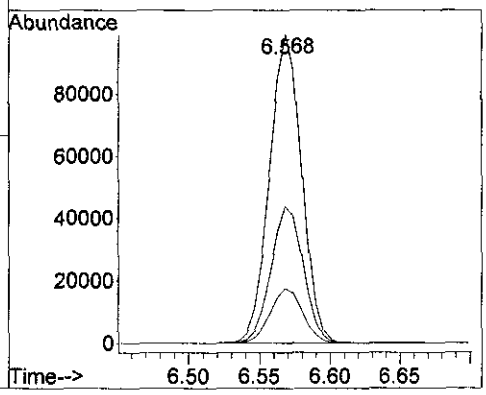




#17
o-Xylene
Concen: 458.28 ppbv
RT: 6.568 min Scan# 1000
Delta R.T. 0.001 min
Lab File: HEN047.D
Acq: 21 Mar 2012 21:16

Tgt Ion: 91 Resp: 157145

Ion	Ratio	Lower	Upper
91	100		
106	44.6	35.8	53.8
105	17.9	14.2	21.4



GC/MS QA-QC Check Report

Tune File : D:\msdchem\1\data\2012\20120321\HEN013.D
Tune Time : 21 Mar 2012 6:19

Daily Calibration File : D:\msdchem\1\data\2012\20120321\HEN014.D

File	Sample	Internal Standard Responses		
		2488	5934	6081
HEN014.D	STD2012032	2488	5934	6081
HEN015.D	20120321-M	2484	5853	6090
HEN016.D	20120321-L	2372	5568	5800
HEN017.D	20120321-L	2454	5763	6037
HEN018.D	51100 \ BL	2496	5834	6128
HEN019.D	51100 \ BL	2443	5708	5898
HEN020.D	51101 \ BL	2461	5760	5977
HEN021.D	51102 \ BL	2429	5585	5979
HEN022.D	51103 \ BL	2285	5269	5498
HEN023.D	51104 \ BL	2431	5639	5962
HEN024.D	51105 \ BL	2316	5402	5739
HEN025.D	51106 \ BL	2381	5488	5809
HEN026.D	51107 \ BL	2327	5381	5481
HEN027.D	51107 \ BL	2348	5358	5613
HEN028.D	51108 \ BL	2401	5549	5747
HEN029.D	51109 \ BL	2407	5572	5707
HEN030.D	51108 \ BL	2299	5335	5468
HEN031.D	51109 \ BL	2284	5285	5525
HEN032.D	51110 \ BL	2273	5354	5432

HEN033.D				
	51110 \ BL	2320	5315	5614
HEN034.D				
	51111 \ BL	2346	5443	5708
[illegible]035.D				
	51112 \ BL	2325	5429	5634
HEN036.D				
	51113 \ BL	2404	5545	5856
HEN037.D				
	51114 \ BL	2388	5486	6137
HEN038.D				
	51115 \ BL	2387	5558	5784
HEN039.D				
	51116 \ BL	2333	5282	5554
HEN040.D				
	51117 \ BL	2351	5407	5719
HEN041.D				
	51118 \ BL	2366	5414	5619
HEN042.D				
	51119 \ BL	2381	5517	5721
HEN043.D				
	51120 \ BL	2403	5536	5769
[illegible]44.D				
	51121 \ BL	2372	5439	5668
HEN045.D				
	51122 \ BL	2263	5229	5437
HEN046.D				
	51123 \ BL	2362	5465	5649
HEN047.D				
	20120321-L	2324	5362	5484

(fails) - fails 24hr time check * - fails criteria

Created: Thu Mar 22 11:14:23 2012 Instrument 2

APPENDIX D

Quantitation Reports

Henry's Dry Cleaners Site
Laconia, New Hampshire

GC/MS Analytical Report

March 2012

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN015.D
Acq On : 21 Mar 2012 6:44
Operator : SJT
Sample : 20120321-MB \ Method Blank
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 06:51:02 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:38:59 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.191	49	2484	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.618	114	5853	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	6090	10.00	ppbv	0.00

System Monitoring Compounds

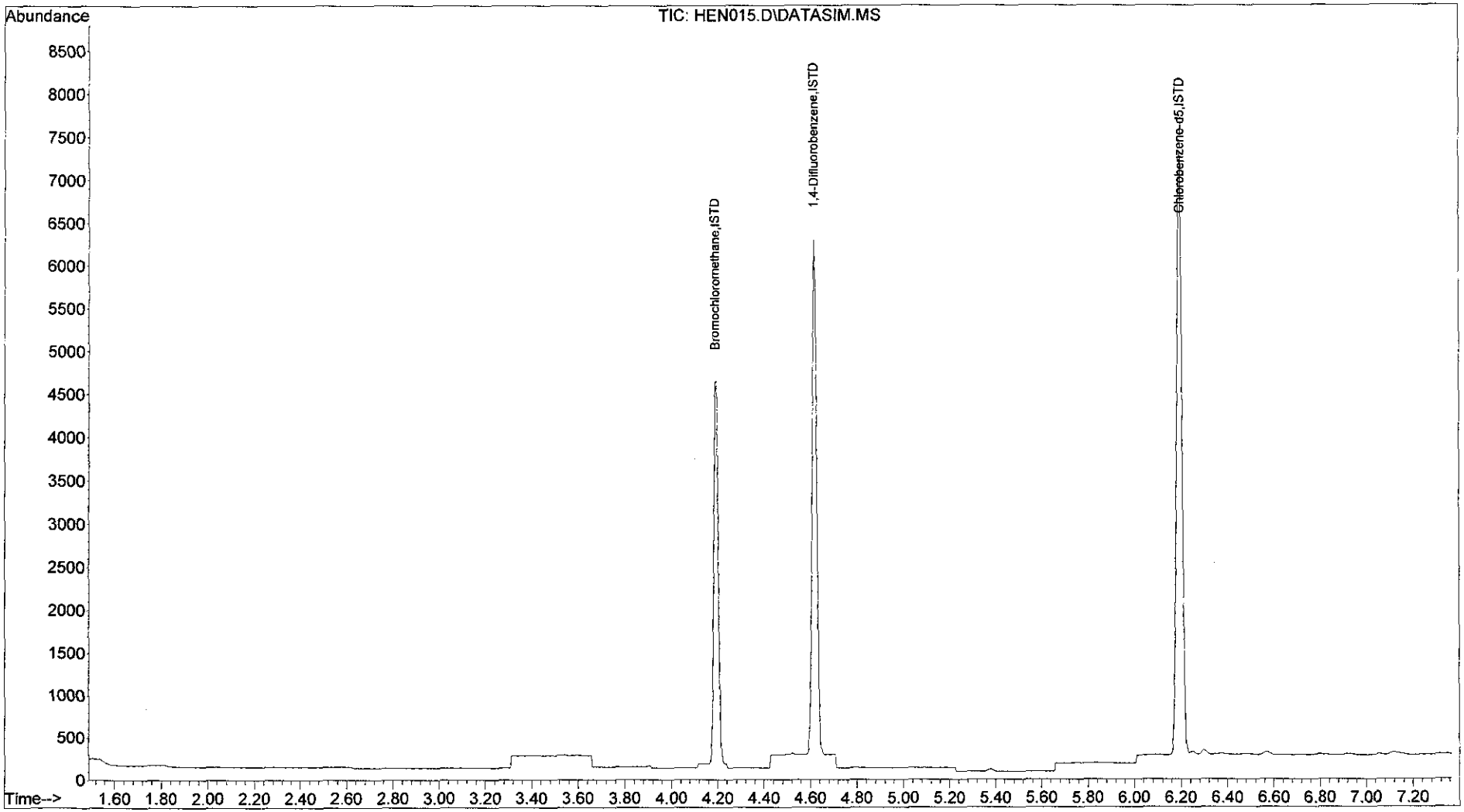
Target Compounds	Qvalue

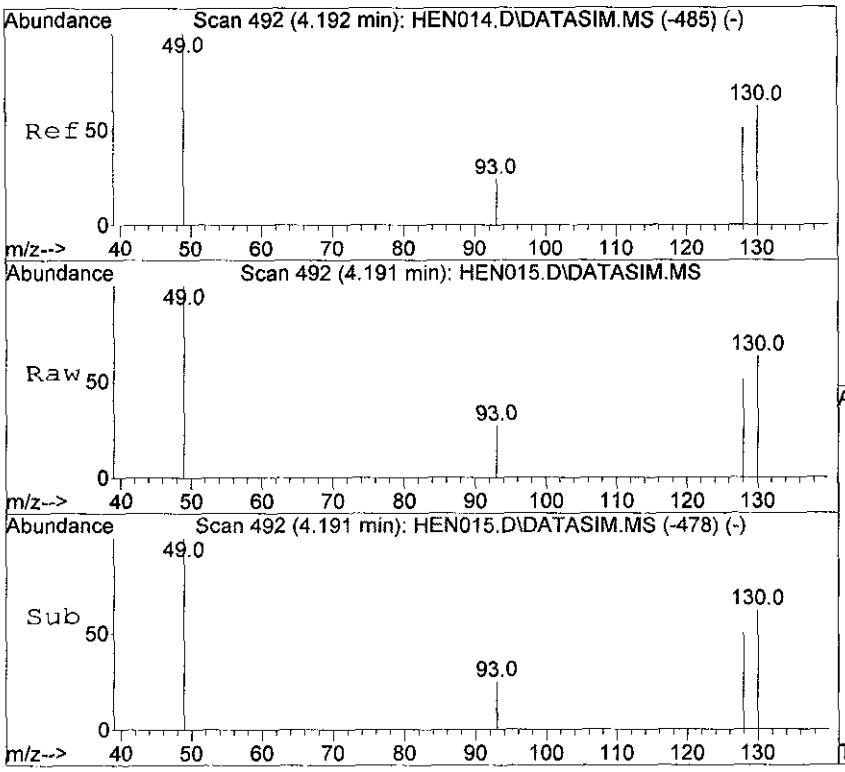
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN015.D
Acq On : 21 Mar 2012 6:44
Operator : SJT
Sample : 20120321-MB \ Method Blank
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 06:51:02 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri Mar 16 15:38:59 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

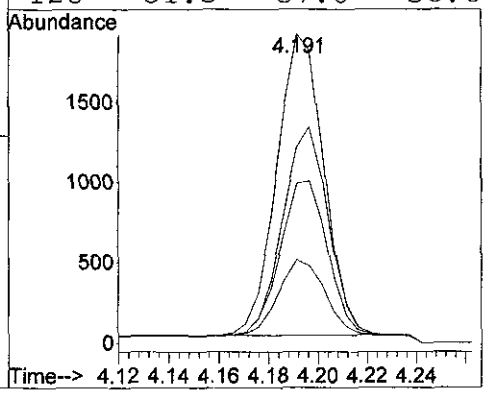


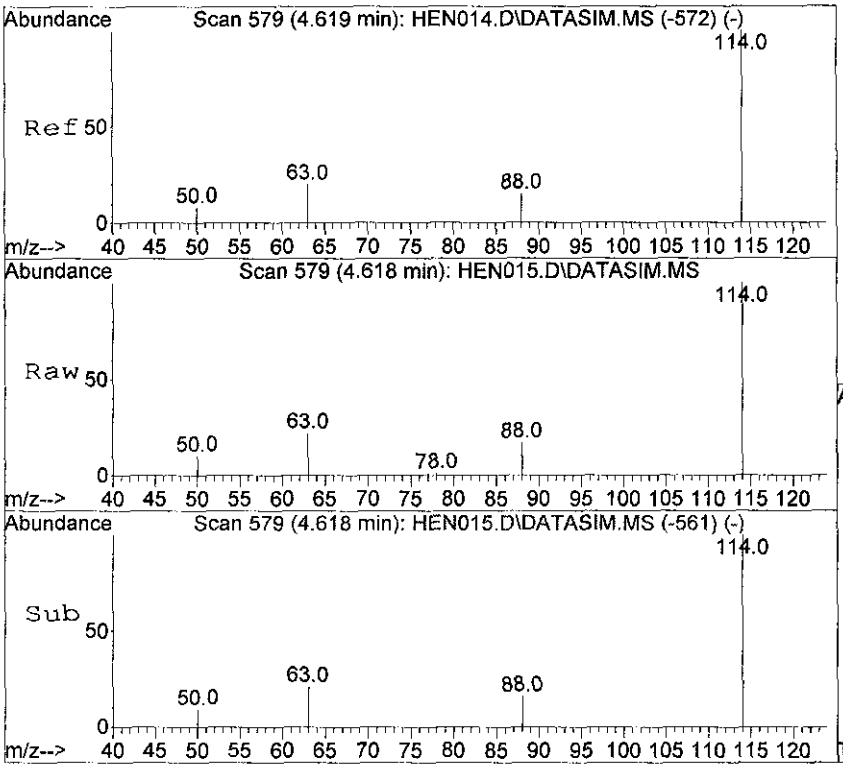


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.191 min Scan# 492
Delta R.T. -0.001 min
Lab File: HEN015.D
Acq: 21 Mar 2012 6:44

Tgt Ion: 49 Resp: 2484

Ion	Ratio	Lower	Upper
49	100		
130	63.0	46.5	69.7
93	26.8	19.0	28.6
128	51.5	37.8	56.6

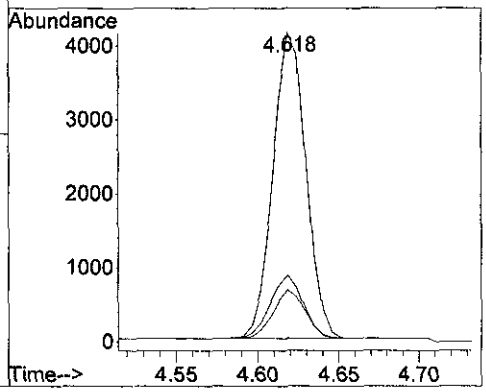


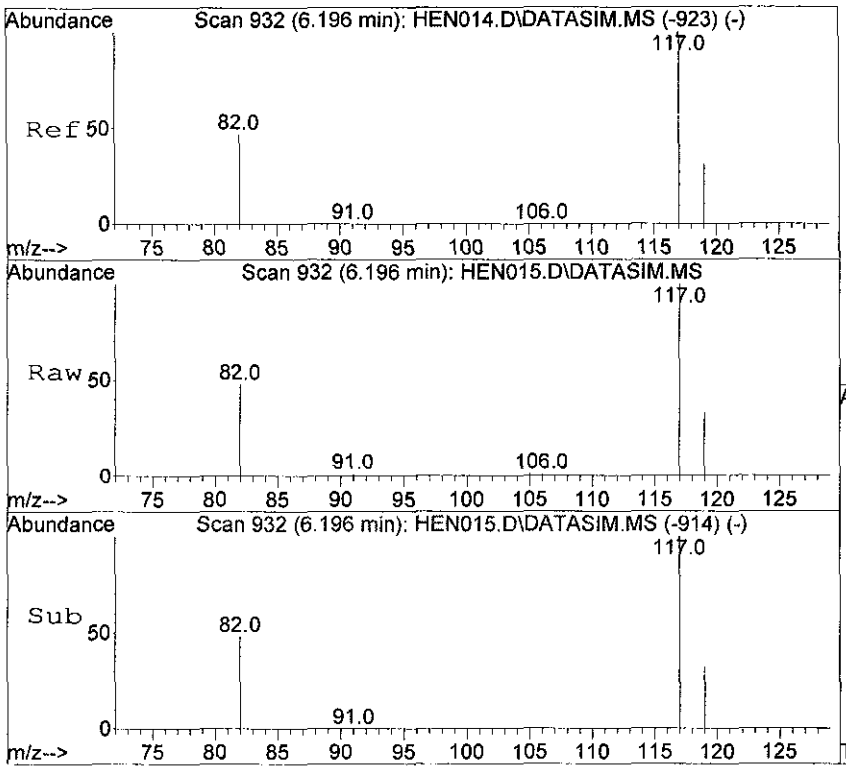


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.618 min Scan# 579
Delta R.T. -0.001 min
Lab File: HEN015.D
Acq: 21 Mar 2012 6:44

Tgt Ion:114 Resp: 5853

Ion	Ratio	Lower	Upper
114	100		
63	20.4	16.7	25.1
88	15.3	12.2	18.2

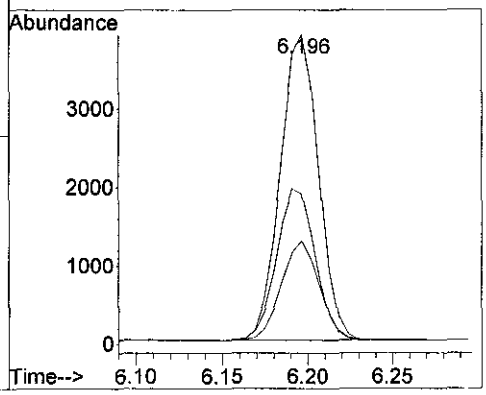




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. -0.000 min
Lab File: HEN015.D
Acq: 21 Mar 2012 6:44

Tgt Ion:117 Resp: 6090

Ion	Ratio	Lower	Upper
117	100		
82	50.2	41.4	62.0
119	32.2	25.8	38.6



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN018.D
Acq On : 21 Mar 2012 12:26
Operator : SJT
Sample : 51100 \ BLDG6-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 12:35:26 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

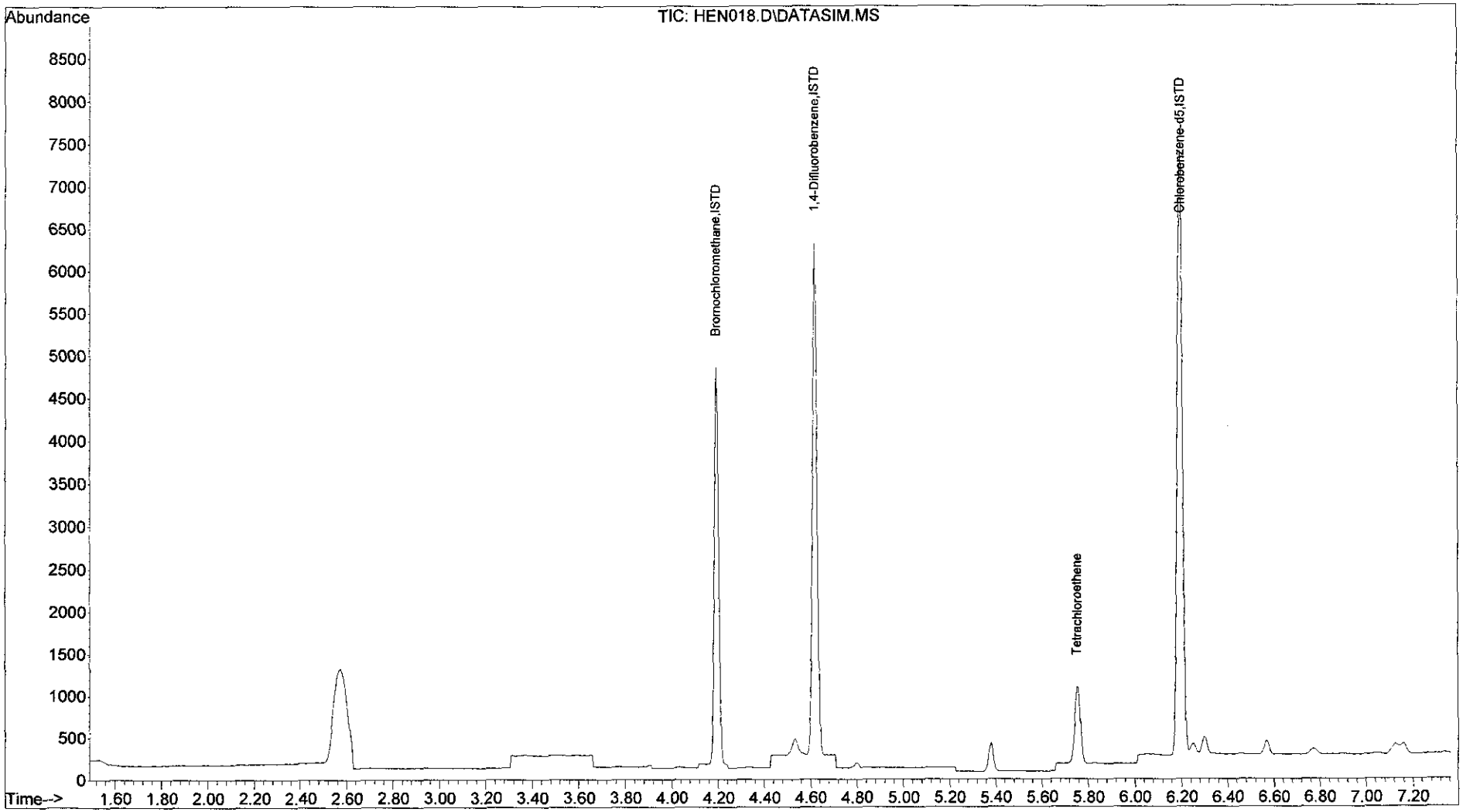
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.192	49	2496	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5834	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.197	117	6128	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
14) Tetrachloroethene	5.752	166	532m	2.64	ppbv	

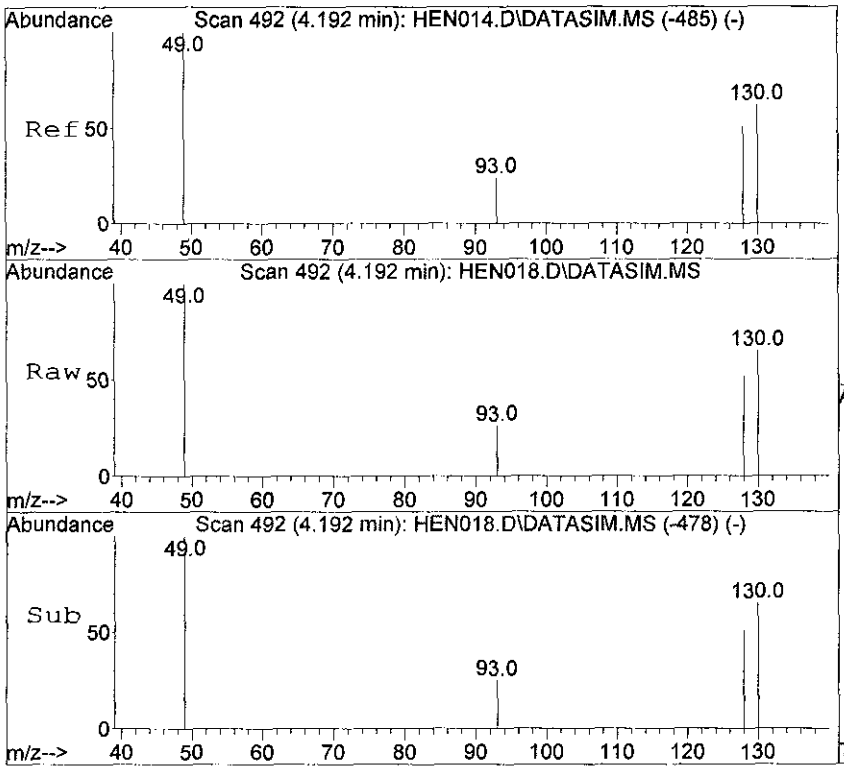
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN018.D
Acq On : 21 Mar 2012 12:26
Operator : SJT
Sample : 51100 \ BLDG6-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 12:35:26 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

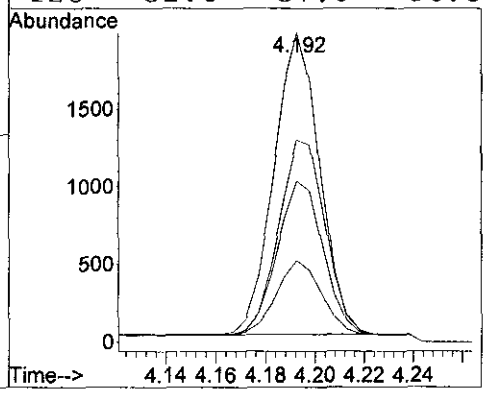


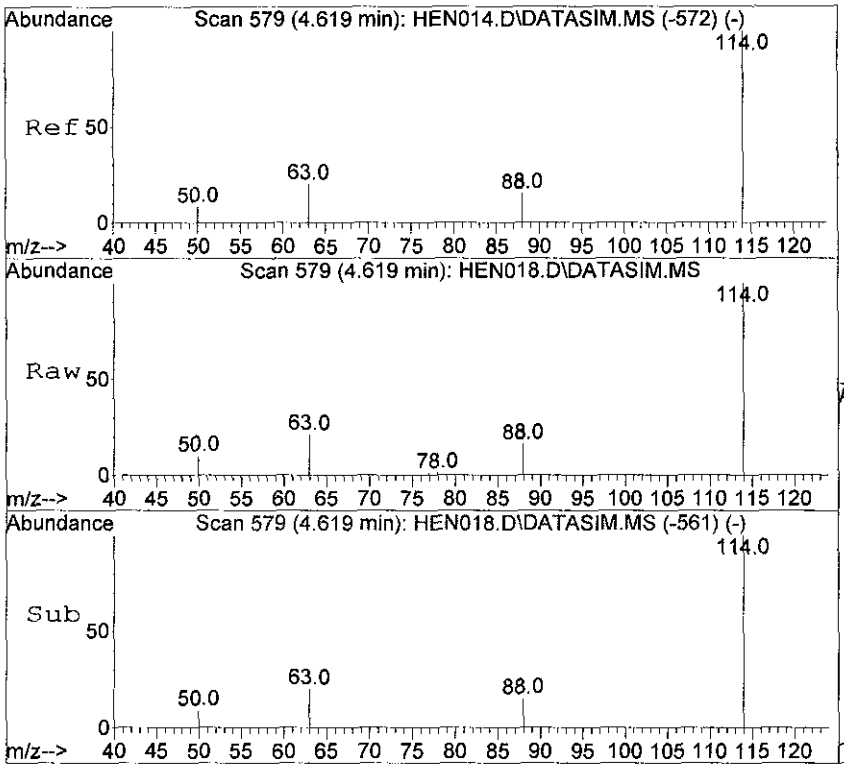


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN018.D
Acq: 21 Mar 2012 12:26

Tgt Ion: 49 Resp: 2496

Ion	Ratio	Lower	Upper
49	100		
130	65.3	46.5	69.7
93	26.3	19.0	28.6
128	52.0	37.8	56.6

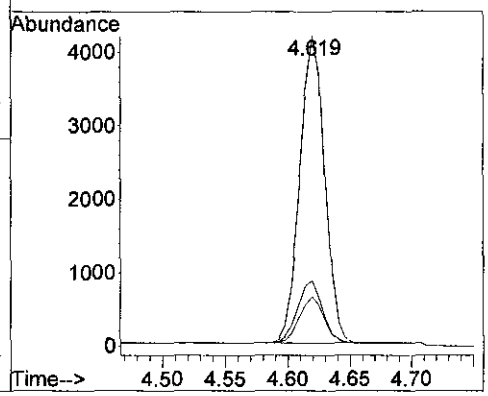


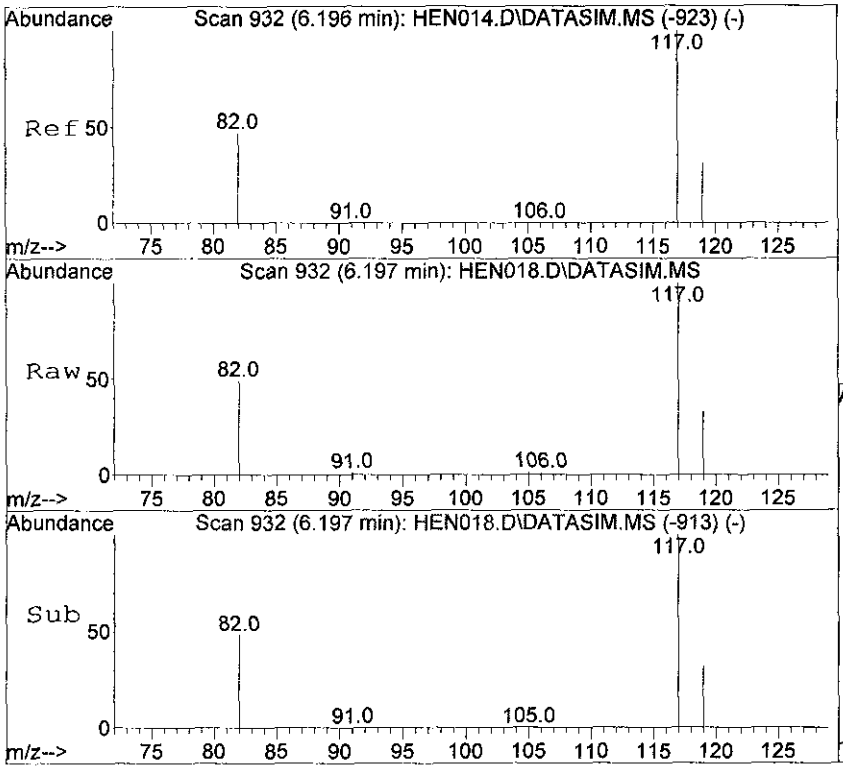


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN018.D
Acq: 21 Mar 2012 12:26

Tgt Ion:114 Resp: 5834

Ion	Ratio	Lower	Upper
114	100		
63	20.3	16.7	25.1
88	14.8	12.2	18.2

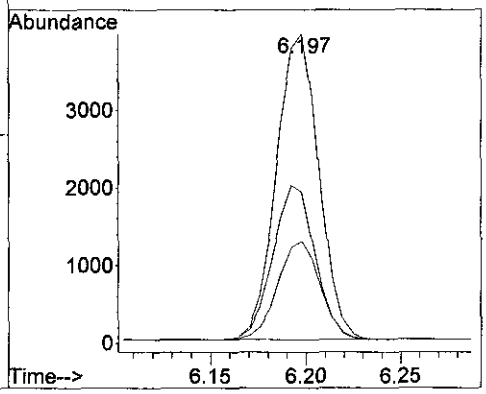


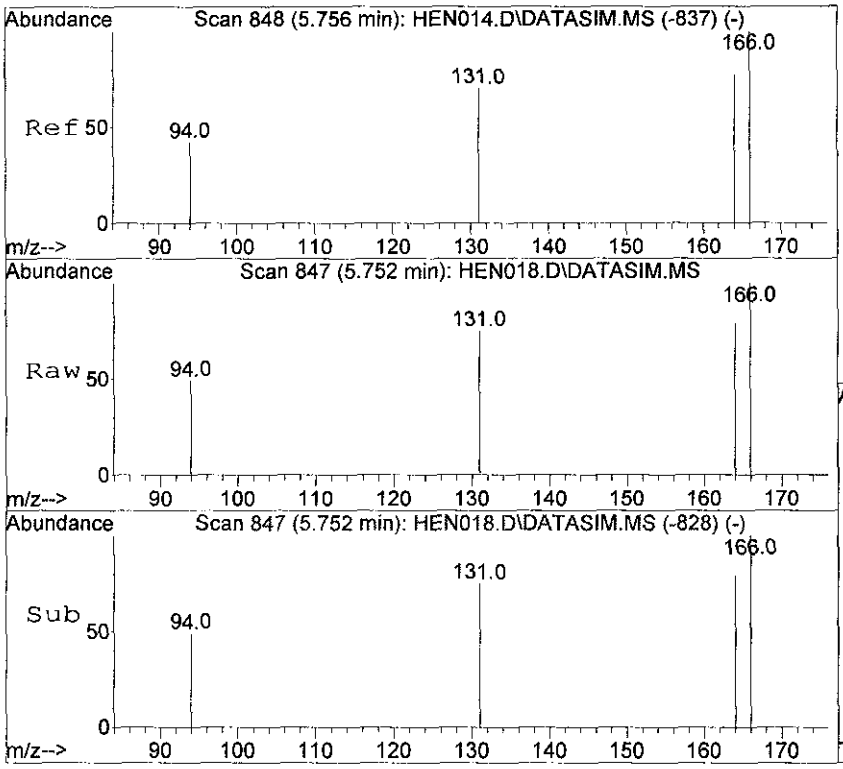


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN018.D
Acq: 21 Mar 2012 12:26

Tgt Ion:117 Resp: 6128

Ion	Ratio	Lower	Upper
117	100		
82	49.9	41.4	62.0
119	31.9	25.8	38.6

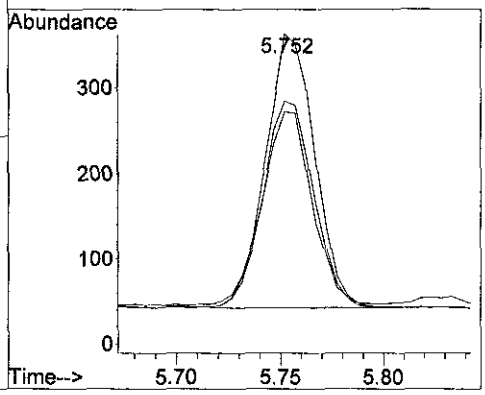




#14
Tetrachloroethene
Concen: 2.64 ppbv m
RT: 5.752 min Scan# 847
Delta R.T. -0.004 min
Lab File: HEN018.D
Acq: 21 Mar 2012 12:26

Tgt Ion:166 Resp: 532

Ion	Ratio	Lower	Upper
166	100		
164	76.5	62.5	93.7
131	71.1	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN019.D
Acq On : 21 Mar 2012 12:38
Operator : SJT
Sample : 51100 \ BLDG6-SS-01 RS
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 12:45:15 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

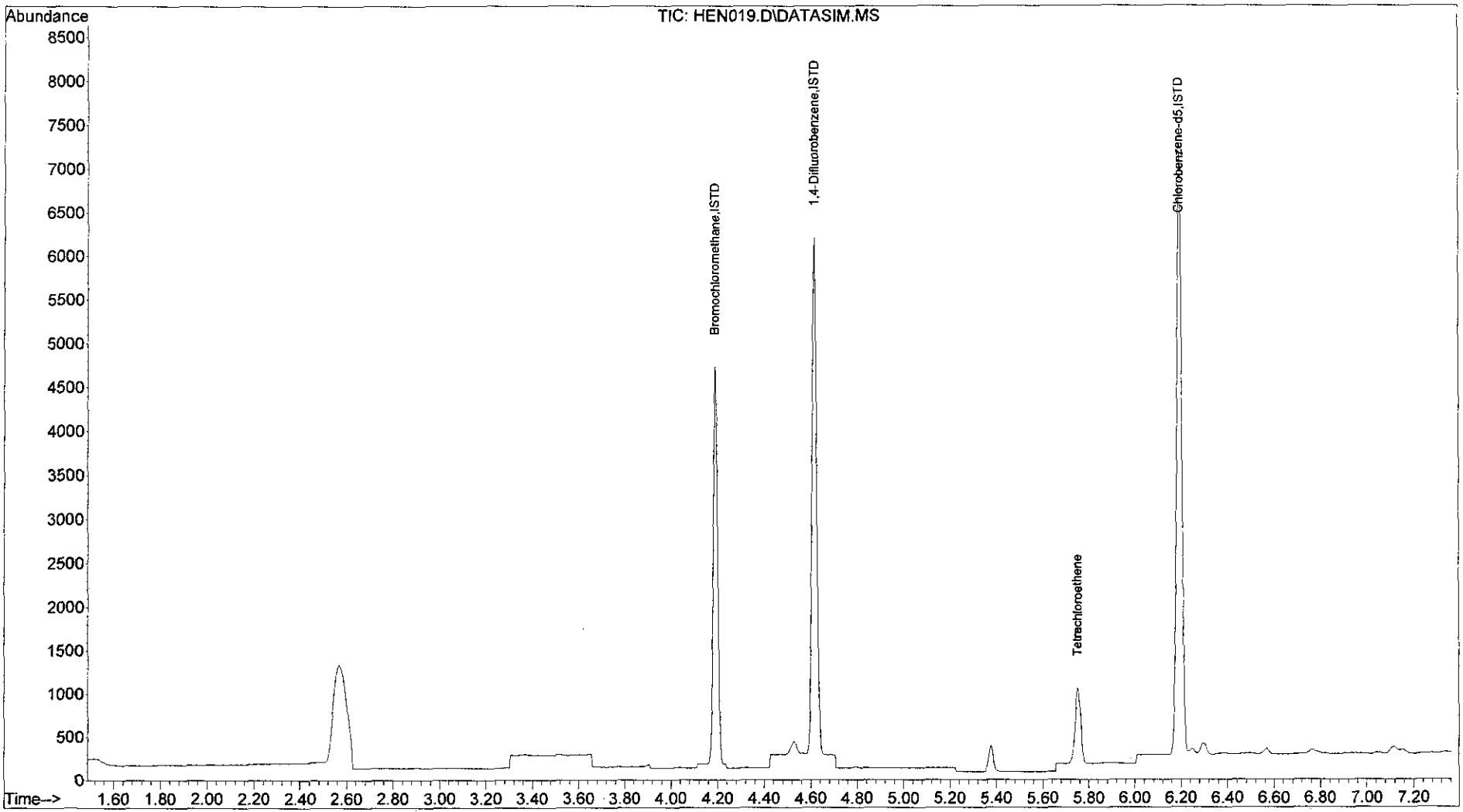
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.193	49	2443	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.620	114	5708	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.192	117	5898	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
14) Tetrachloroethene	5.752	166	512	2.64 ppbv	99

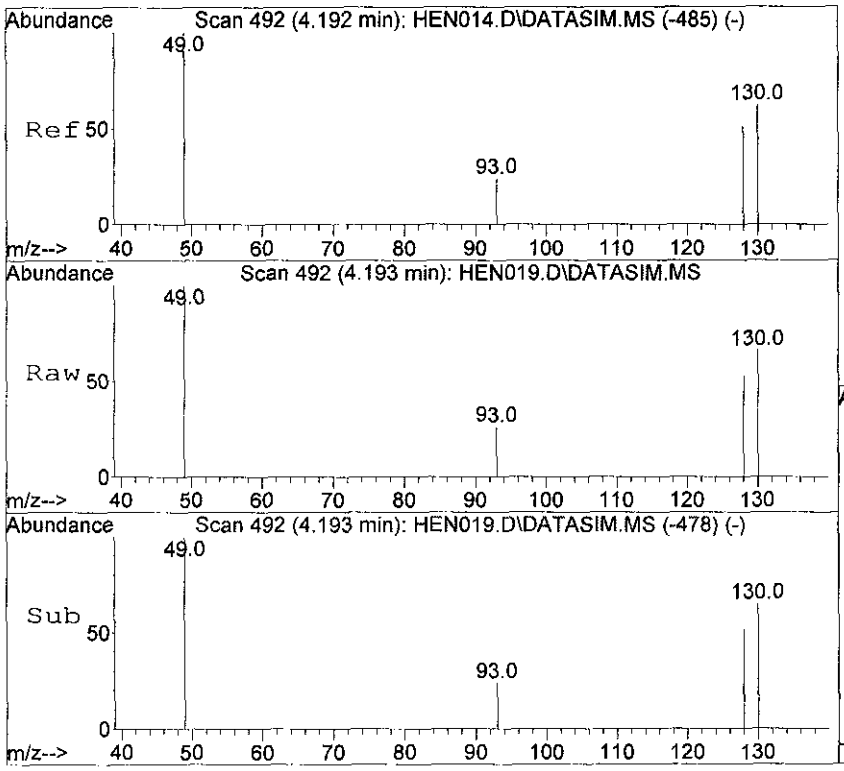
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN019.D
Acq On : 21 Mar 2012 12:38
Operator : SJT
Sample : 51100 \ BLDG6-SS-01 RS
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 12:45:15 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

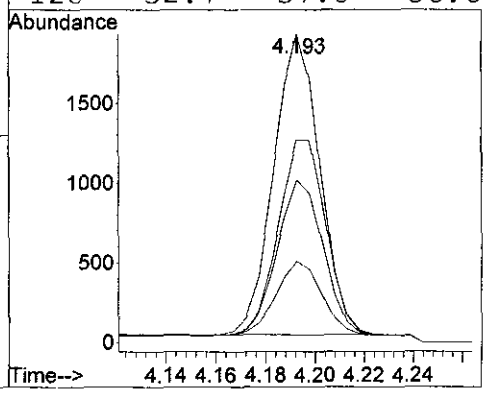


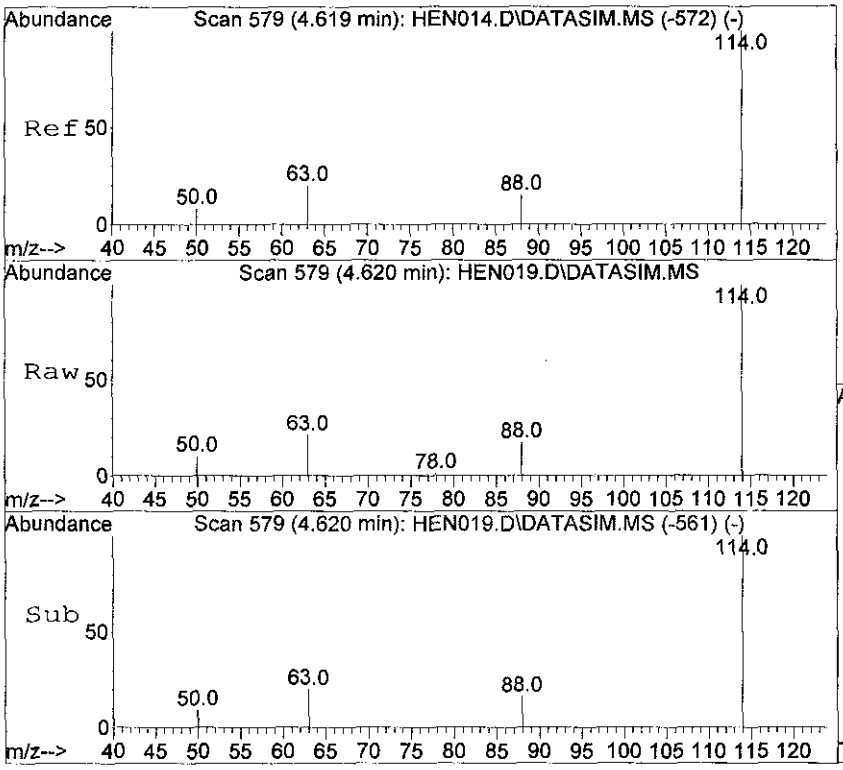


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.193 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN019.D
Acq: 21 Mar 2012 12:38

Tgt Ion: 49 Resp: 2443

Ion	Ratio	Lower	Upper
49	100		
130	65.6	46.5	69.7
93	26.2	19.0	28.6
128	52.7	37.8	56.6

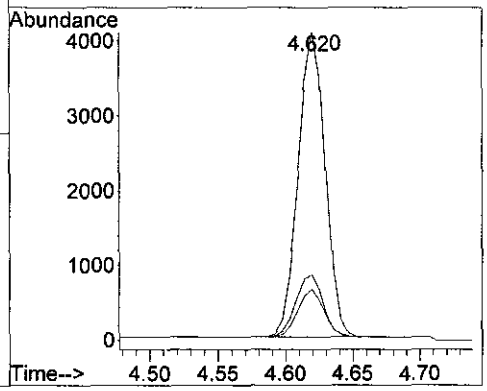


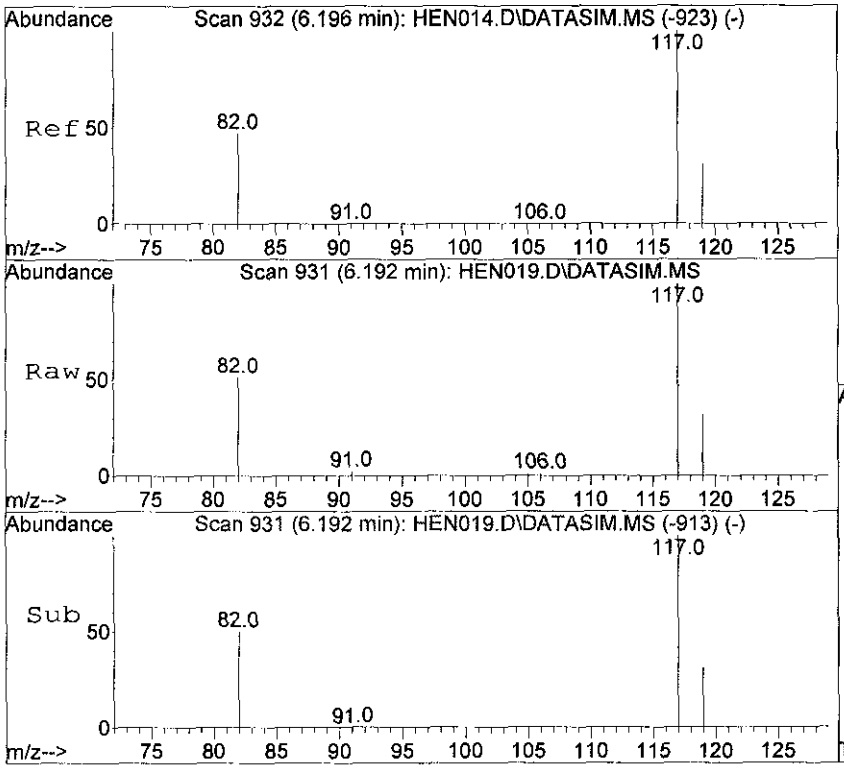


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.620 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN019.D
Acq: 21 Mar 2012 12:38

Tgt Ion:114 Resp: 5708

Ion	Ratio	Lower	Upper
114	100		
63	20.6	16.7	25.1
88	15.3	12.2	18.2

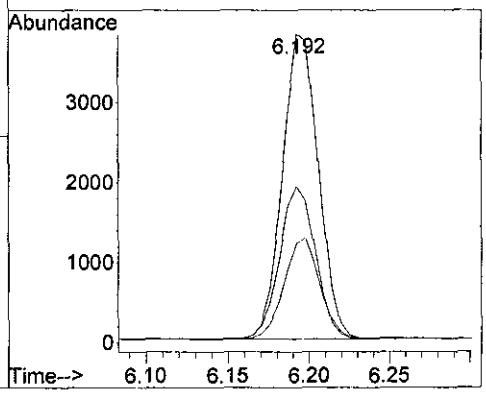


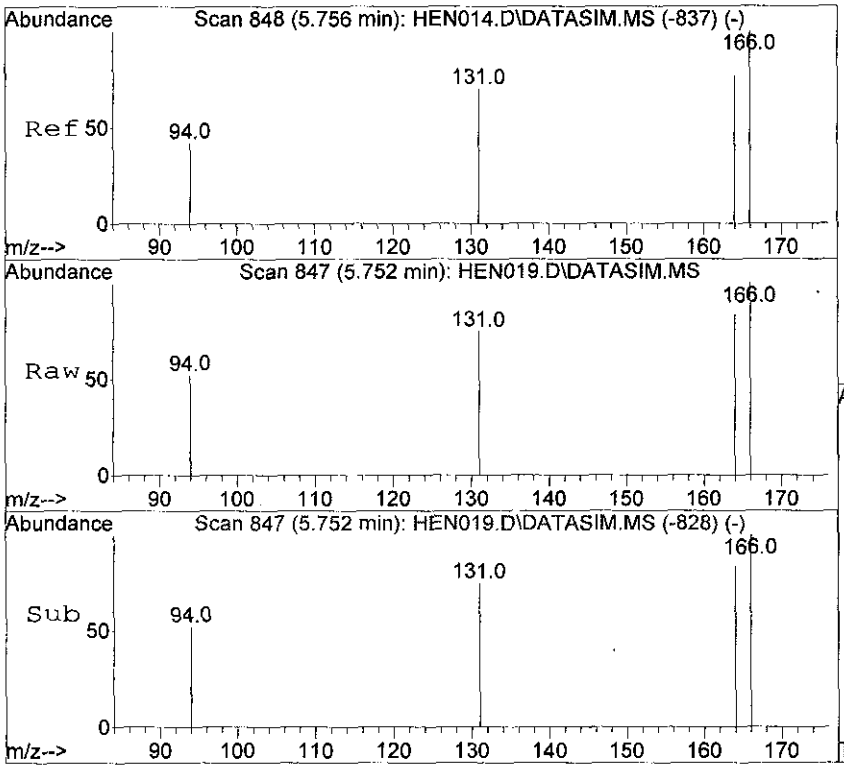


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.192 min Scan# 931
Delta R.T. -0.004 min
Lab File: HEN019.D
Acq: 21 Mar 2012 12:38

Tgt Ion:117 Resp: 5898

Ion	Ratio	Lower	Upper
117	100		
82	49.7	41.4	62.0
119	32.7	25.8	38.6

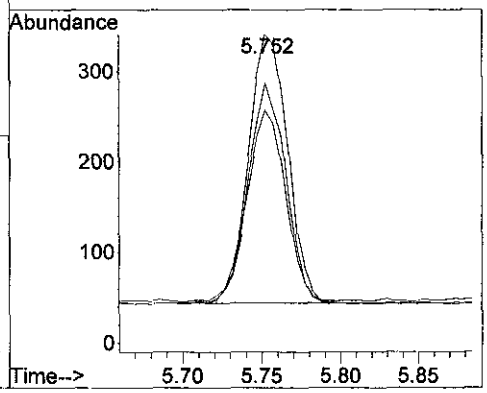




#14
Tetrachloroethene
Concen: 2.64 ppbv
RT: 5.752 min Scan# 847
Delta R.T. -0.004 min
Lab File: HEN019.D
Acq: 21 Mar 2012 12:38

Tgt Ion:166 Resp: 512

Ion	Ratio	Lower	Upper
166	100		
164	79.3	62.5	93.7
131	70.1	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN020.D
Acq On : 21 Mar 2012 12:49
Operator : SJT
Sample : 51101 \ BLDG6-SS-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 12:57:09 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

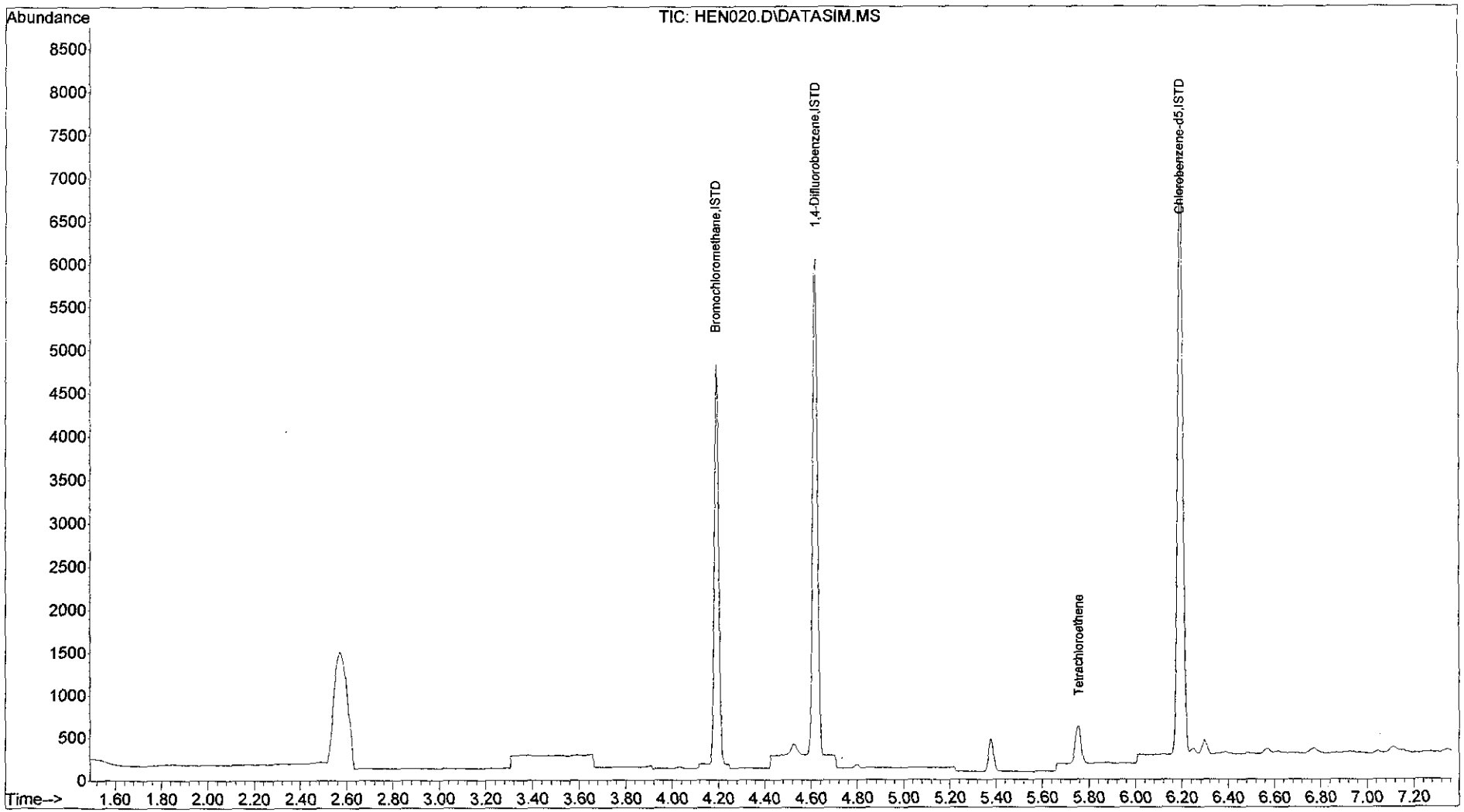
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.193	49	2461	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.621	114	5760	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.193	117	5977	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
14) Tetrachloroethene	5.758	166	263m	1.34 ppbv	

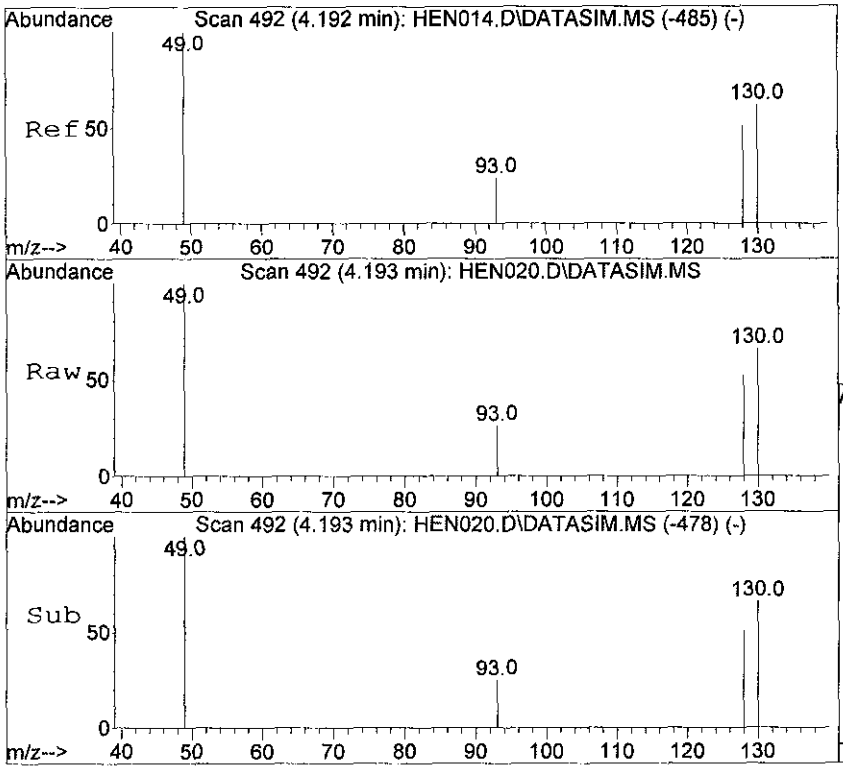
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN020.D
Acq On : 21 Mar 2012 12:49
Operator : SJT
Sample : 51101 \ BLDG6-SS-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 12:57:09 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

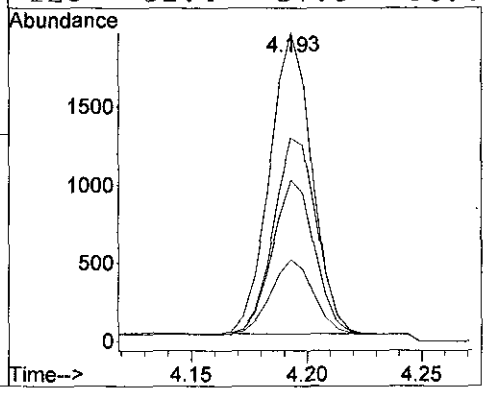


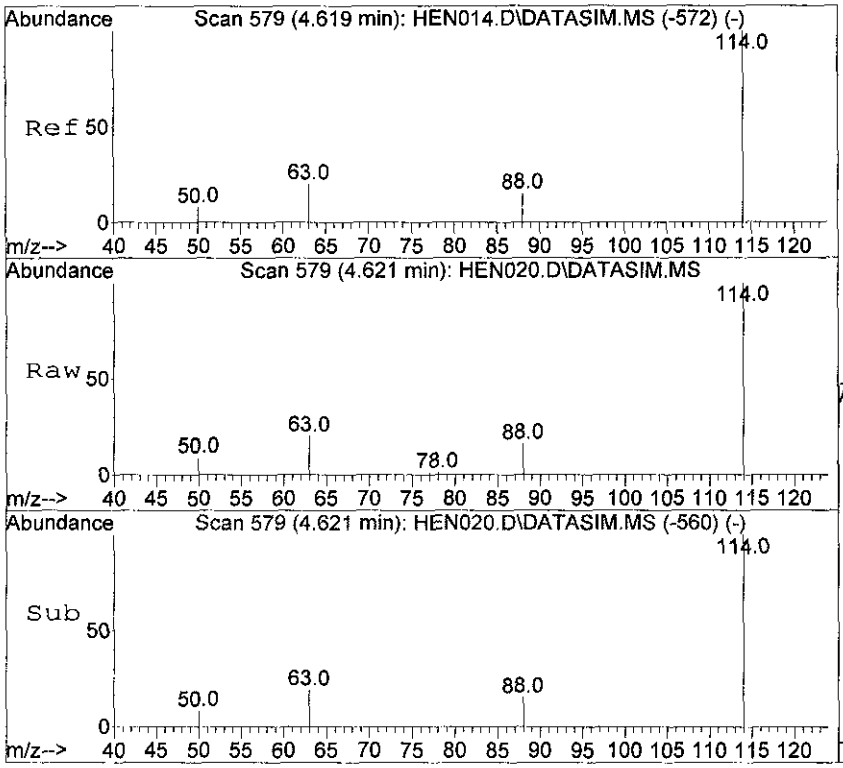


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.193 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN020.D
Acq: 21 Mar 2012 12:49

Tgt Ion: 49 Resp: 2461

Ion	Ratio	Lower	Upper
49	100		
130	66.1	46.5	69.7
93	26.4	19.0	28.6
128	52.4	37.8	56.6

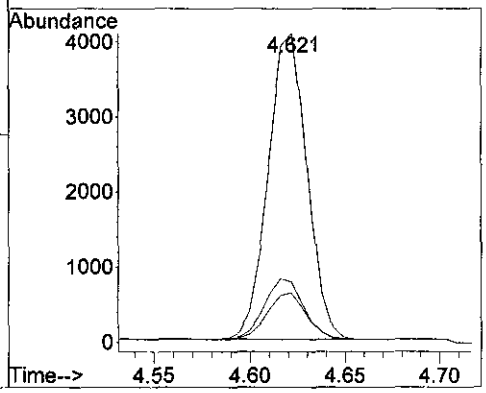


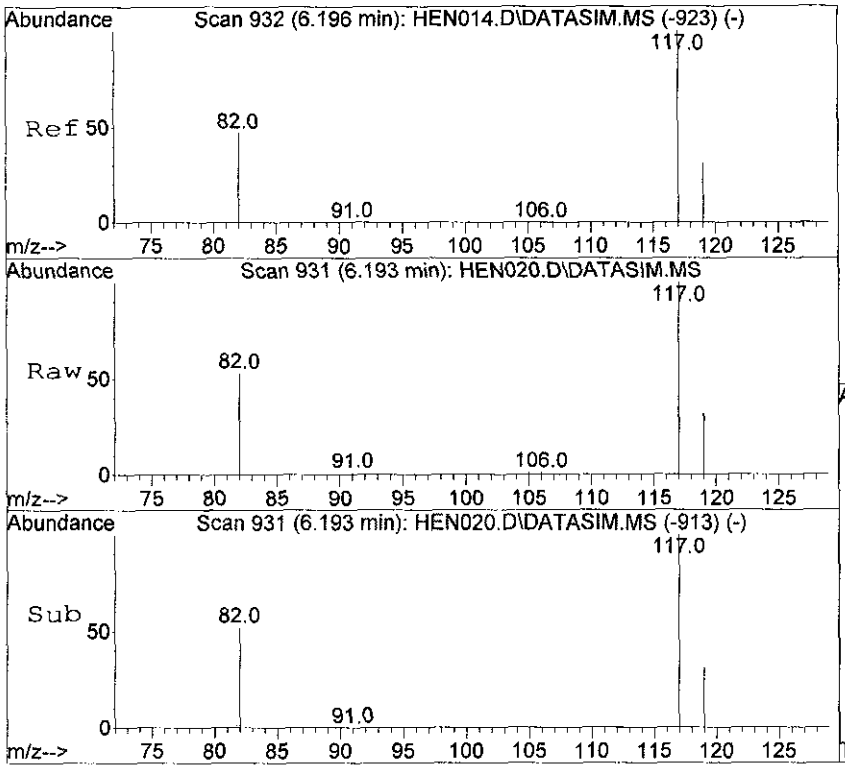


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.621 min Scan# 579
Delta R.T. 0.002 min
Lab File: HEN020.D
Acq: 21 Mar 2012 12:49

Tgt Ion:114 Resp: 5760

Ion	Ratio	Lower	Upper
114	100		
63	19.7	16.7	25.1
88	15.0	12.2	18.2

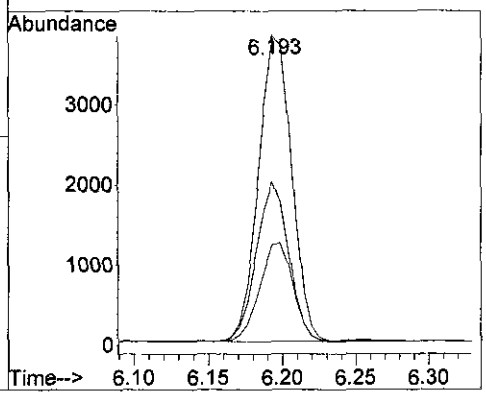


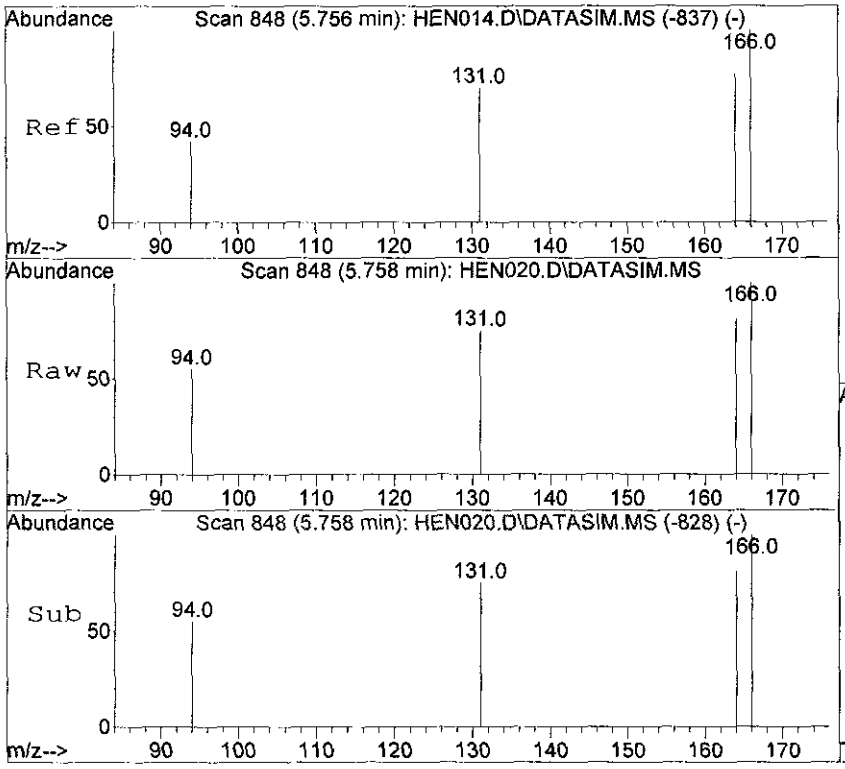


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.193 min Scan# 931
Delta R.T. -0.003 min
Lab File: HEN020.D
Acq: 21 Mar 2012 12:49

Tgt Ion:117 Resp: 5977

Ion	Ratio	Lower	Upper
117	100		
82	50.4	41.4	62.0
119	32.5	25.8	38.6

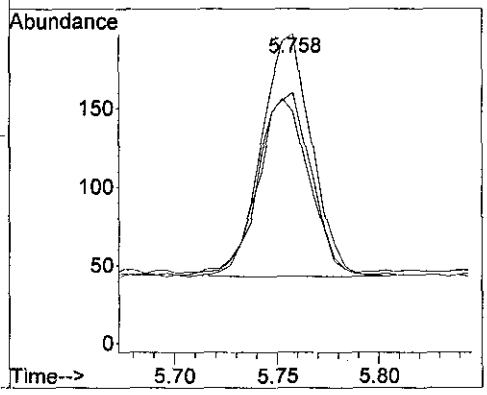




#14
Tetrachloroethene
Concen: 1.34 ppbv m
RT: 5.758 min Scan# 848
Delta R.T. 0.002 min
Lab File: HEN020.D
Acq: 21 Mar 2012 12:49

Tgt Ion:166 Resp: 263

Ion	Ratio	Lower	Upper
166	100		
164	80.6	62.5	93.7
131	70.7	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN021.D
Acq On : 21 Mar 2012 13:01
Operator : SJT
Sample : 51102 \ BLDG6-SS-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 13:10:23 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

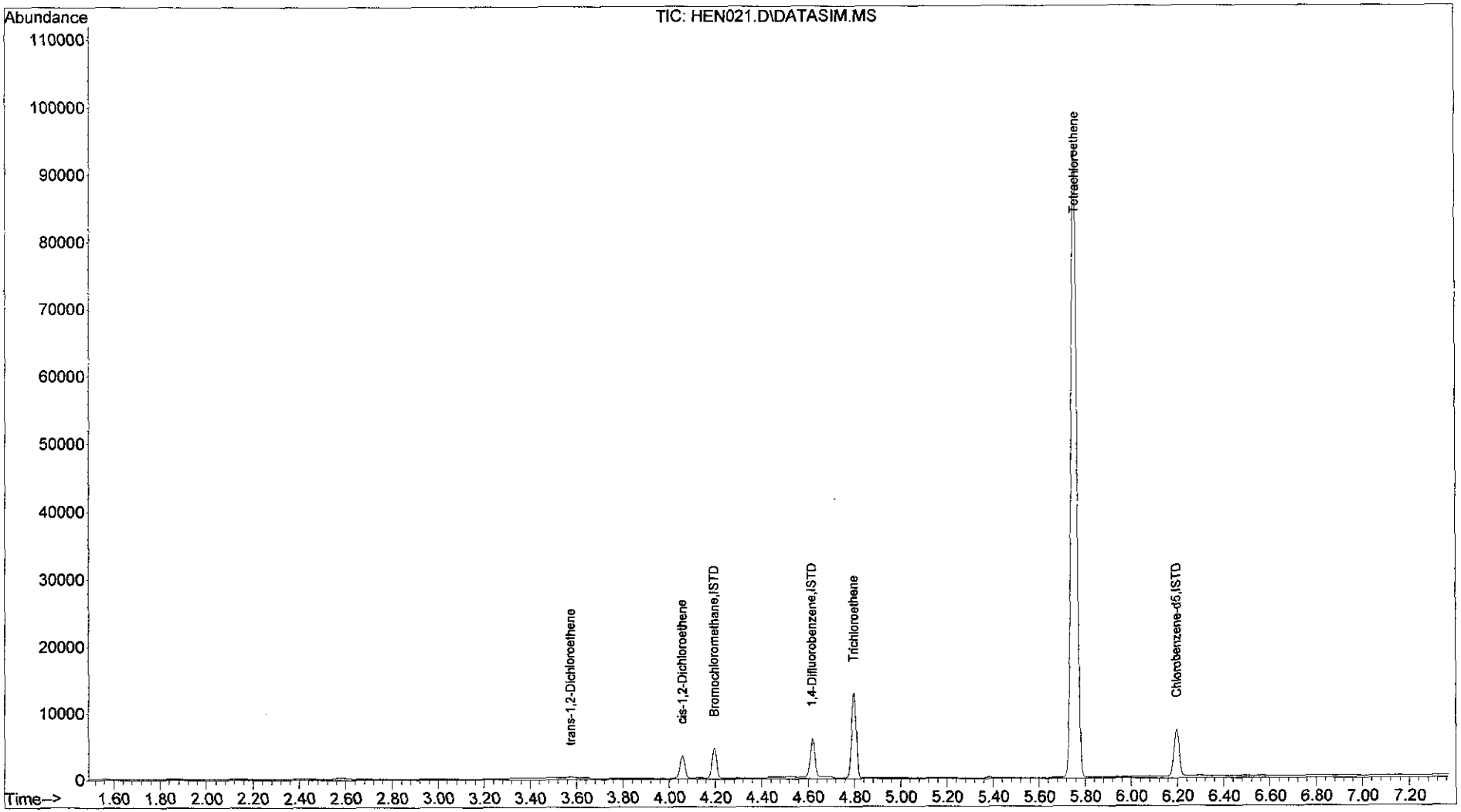
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.196	49	2429	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.618	114	5585	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	5979	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
5) trans-1,2-Dichloroethene	3.574	61	107	0.66	ppbv	96
7) cis-1,2-Dichloroethene	4.058	61	2198m	14.10	ppbv	
11) Trichloroethene	4.799	130	5953	39.59	ppbv	99
14) Tetrachloroethene	5.756	166	54254	276.01	ppbv	100

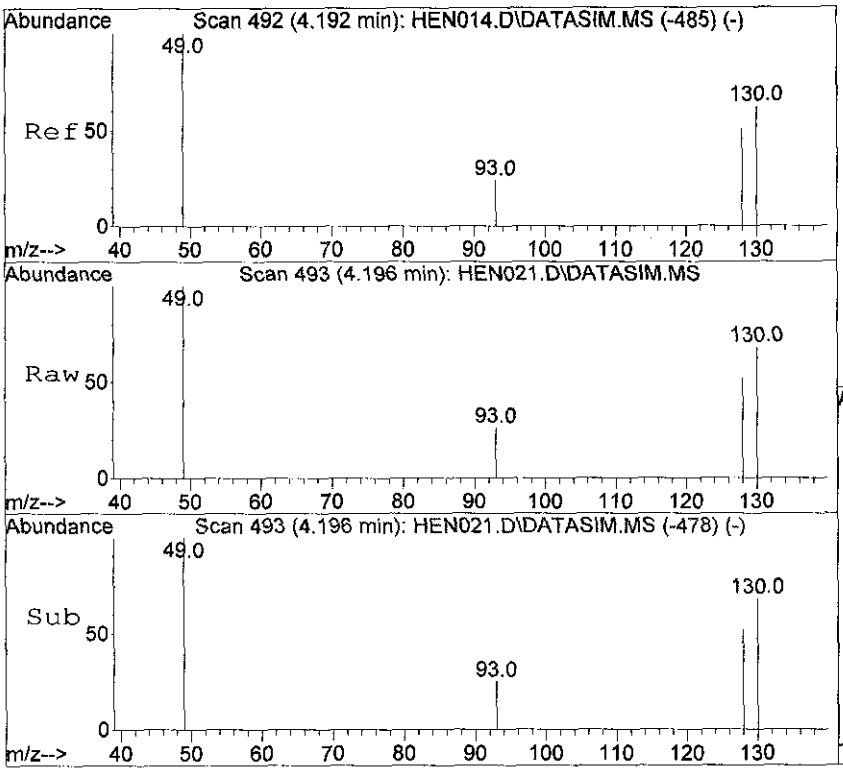
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN021.D
Acq On : 21 Mar 2012 13:01
Operator : SJT
Sample : 51102 \ BLDG6-SS-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 13:10:23 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

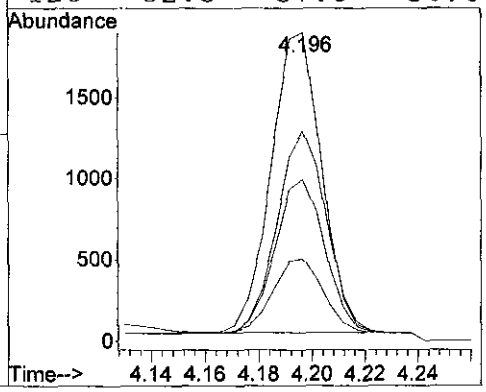


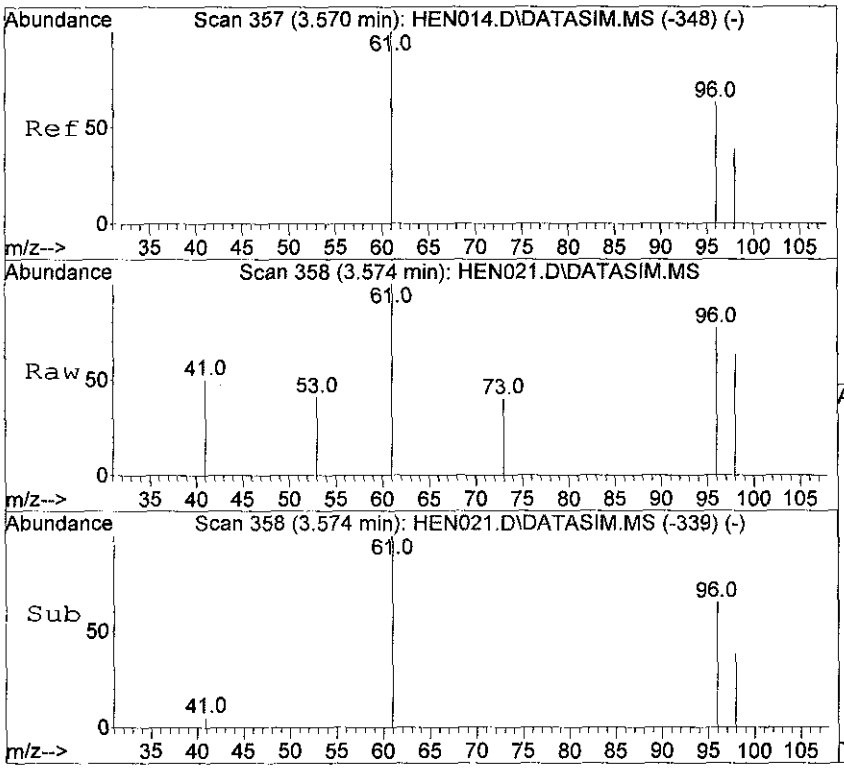


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.196 min Scan# 493
Delta R.T. 0.004 min
Lab File: HEN021.D
Acq: 21 Mar 2012 13:01

Tgt Ion: 49 Resp: 2429

Ion	Ratio	Lower	Upper
49	100		
130	68.1	46.5	69.7
93	26.5	19.0	28.6
128	52.3	37.8	56.6

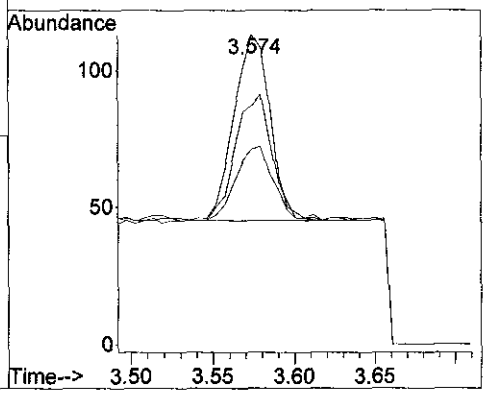


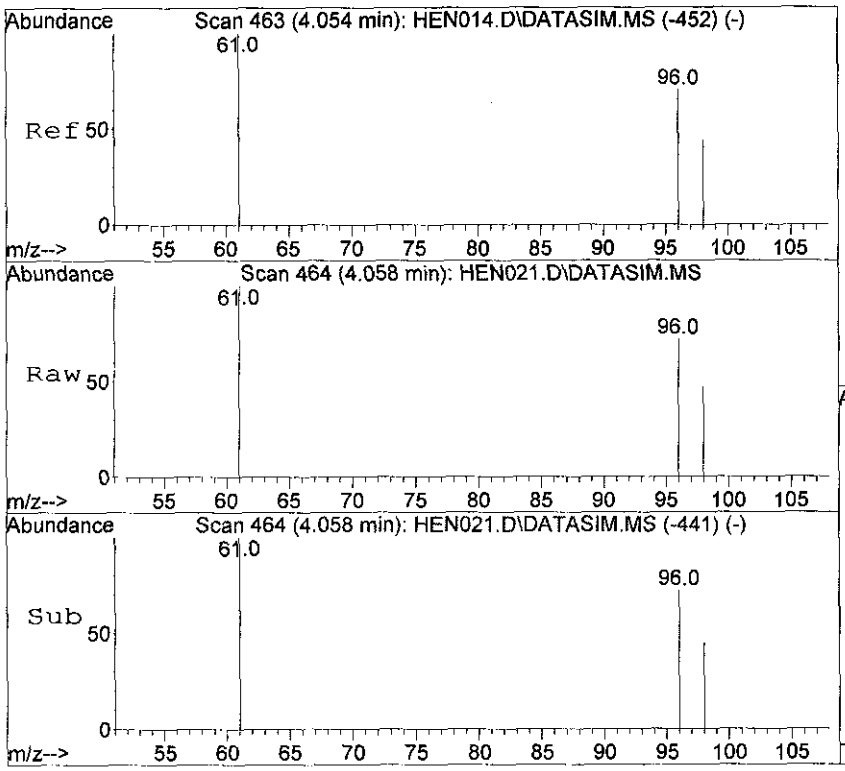


#5
trans-1,2-Dichloroethene
Concen: 0.66 ppbv
RT: 3.574 min Scan# 358
Delta R.T. 0.004 min
Lab File: HEN021.D
Acq: 21 Mar 2012 13:01

Tgt Ion: 61 Resp: 107

Ion	Ratio	Lower	Upper
61	100		
96	68.2	51.3	76.9
98	40.2	32.7	49.1

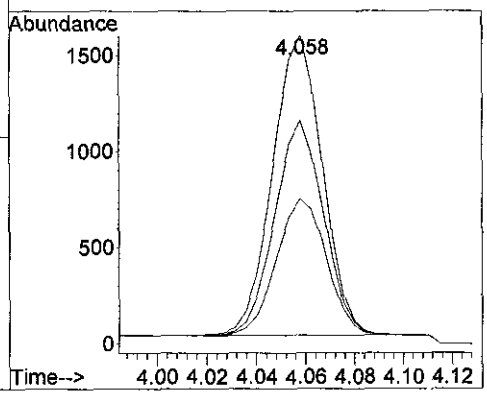


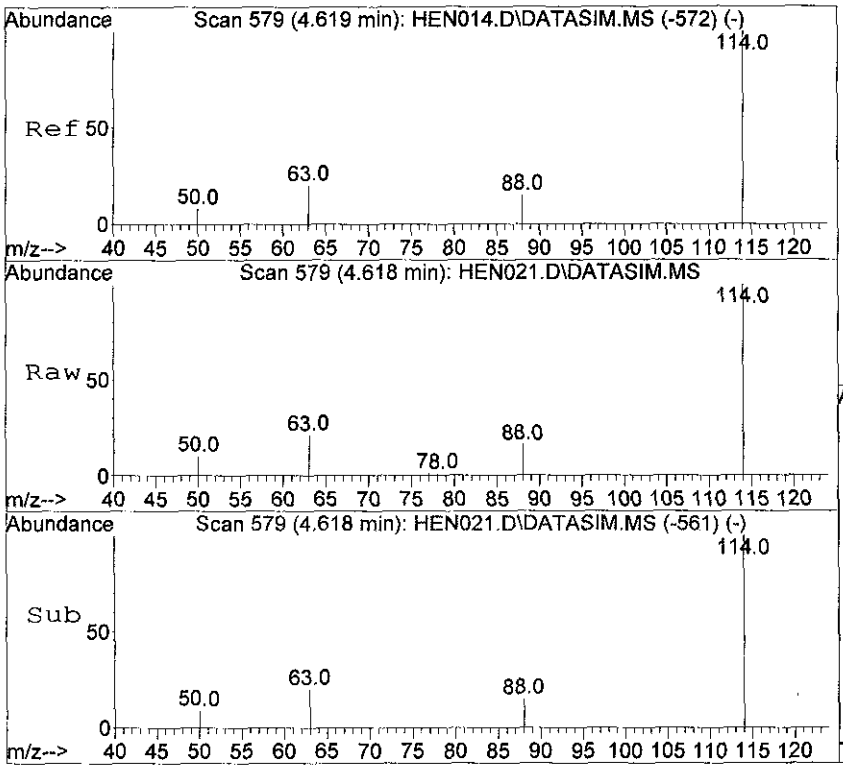


#7
cis-1,2-Dichloroethene
Concen: 14.10 ppbv m
RT: 4.058 min Scan# 464
Delta R.T. 0.003 min
Lab File: HEN021.D
Acq: 21 Mar 2012 13:01

Tgt Ion: 61 Resp: 2198

Ion	Ratio	Lower	Upper
61	100		
96	82.3	56.2	84.4
98	56.8	36.0	54.0#

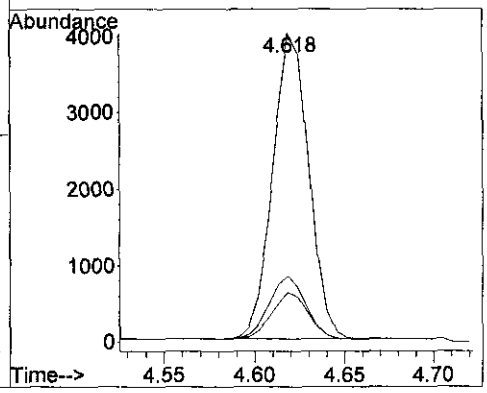


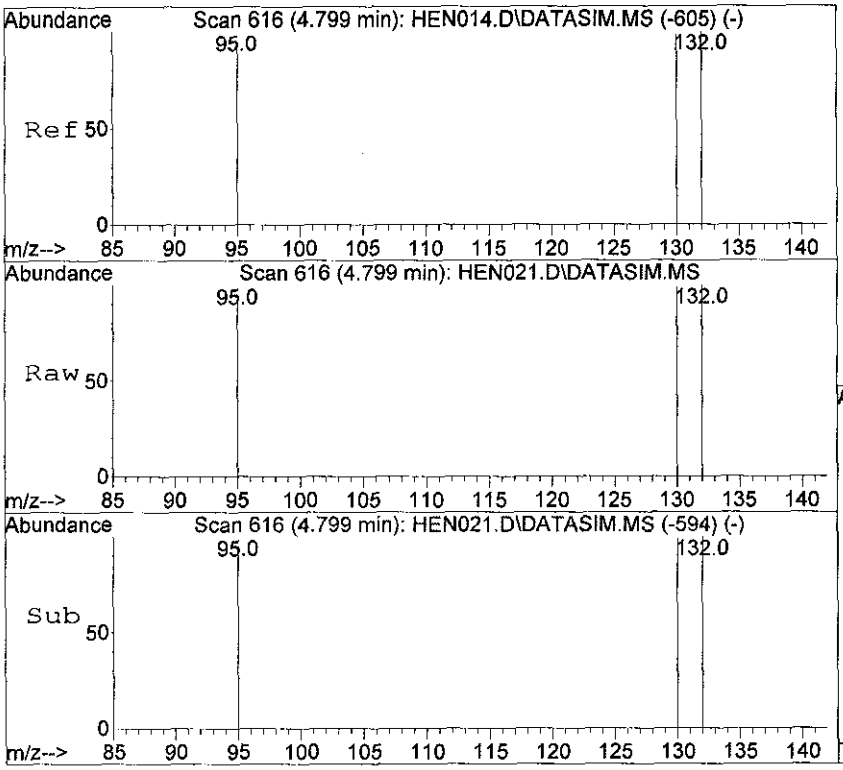


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.618 min Scan# 579
Delta R.T. -0.001 min
Lab File: HEN021.D
Acq: 21 Mar 2012 13:01

Tgt Ion:114 Resp: 5585

Ion	Ratio	Lower	Upper
114	100		
63	20.4	16.7	25.1
88	15.1	12.2	18.2

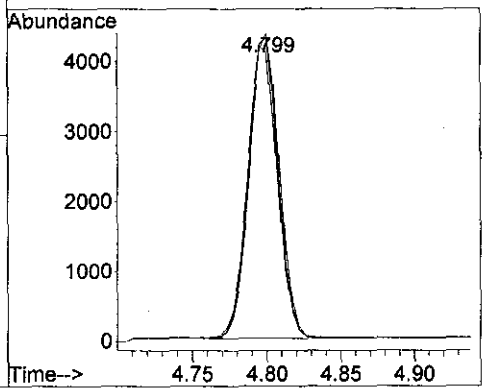


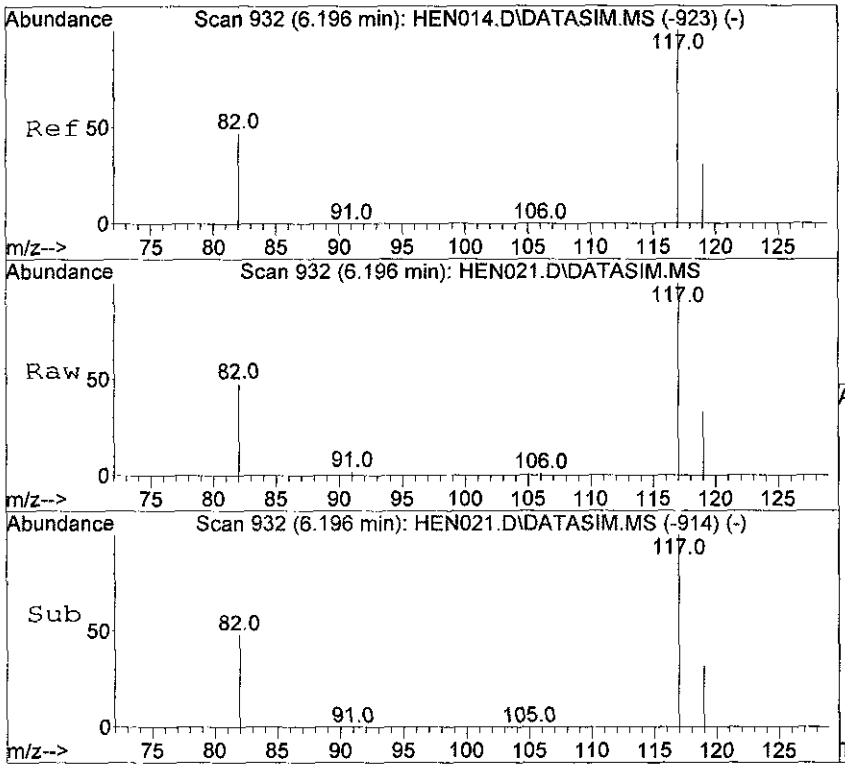


#11
Trichloroethene
Concen: 39.59 ppbv
RT: 4.799 min Scan# 616
Delta R.T. 0.000 min
Lab File: HEN021.D
Acq: 21 Mar 2012 13:01

Tgt Ion:130 Resp: 5953

Ion	Ratio	Lower	Upper
130	100		
132	101.0	80.4	120.6
95	97.3	78.6	118.0

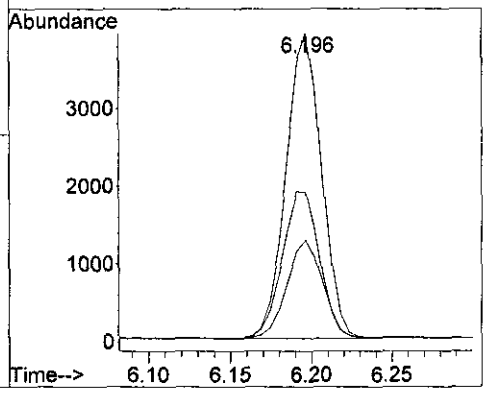


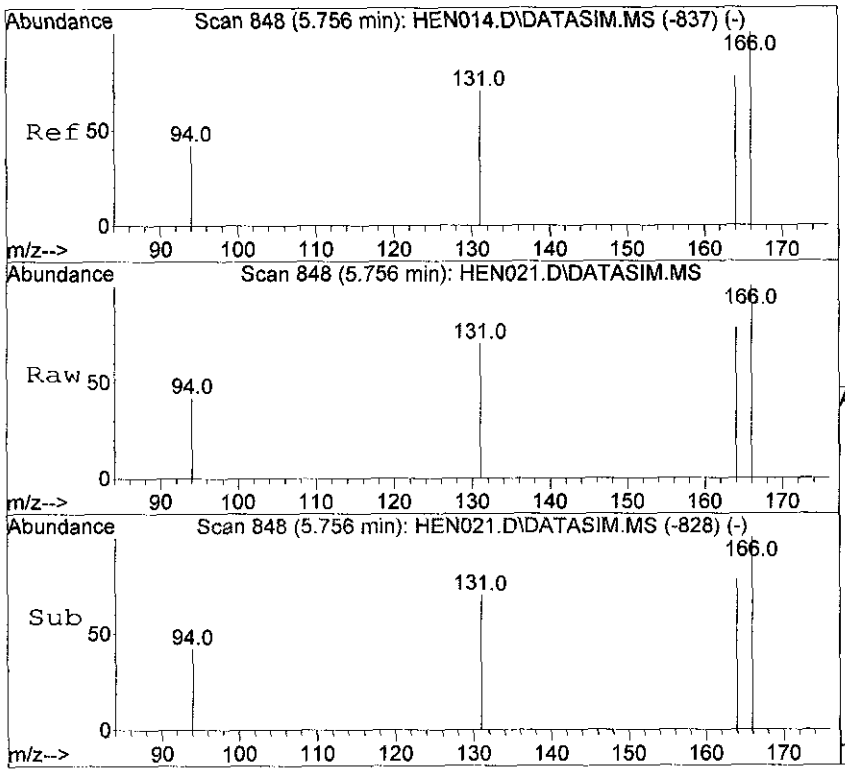


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. 0.000 min
Lab File: HEN021.D
Acq: 21 Mar 2012 13:01

Tgt Ion:117 Resp: 5979

Ion	Ratio	Lower	Upper
117	100		
82	50.0	41.4	62.0
119	32.1	25.8	38.6

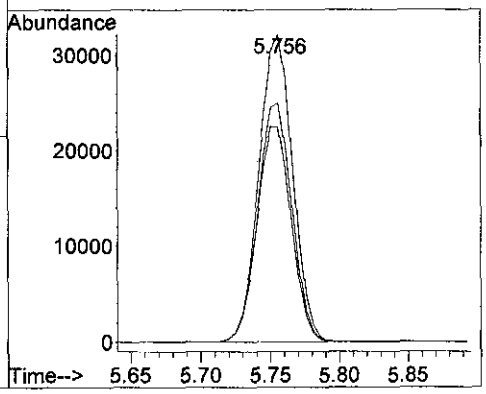




#14
Tetrachloroethene
Concen: 276.01 ppbv
RT: 5.756 min Scan# 848
Delta R.T. 0.000 min
Lab File: HEN021.D
Acq: 21 Mar 2012 13:01

Tgt Ion:166 Resp: 54254

Ion	Ratio	Lower	Upper
166	100		
164	78.4	62.5	93.7
131	71.3	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN022.D
Acq On : 21 Mar 2012 13:14
Operator : SJT
Sample : 51103 \ BLDG6-SS-04
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 13:20:36 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

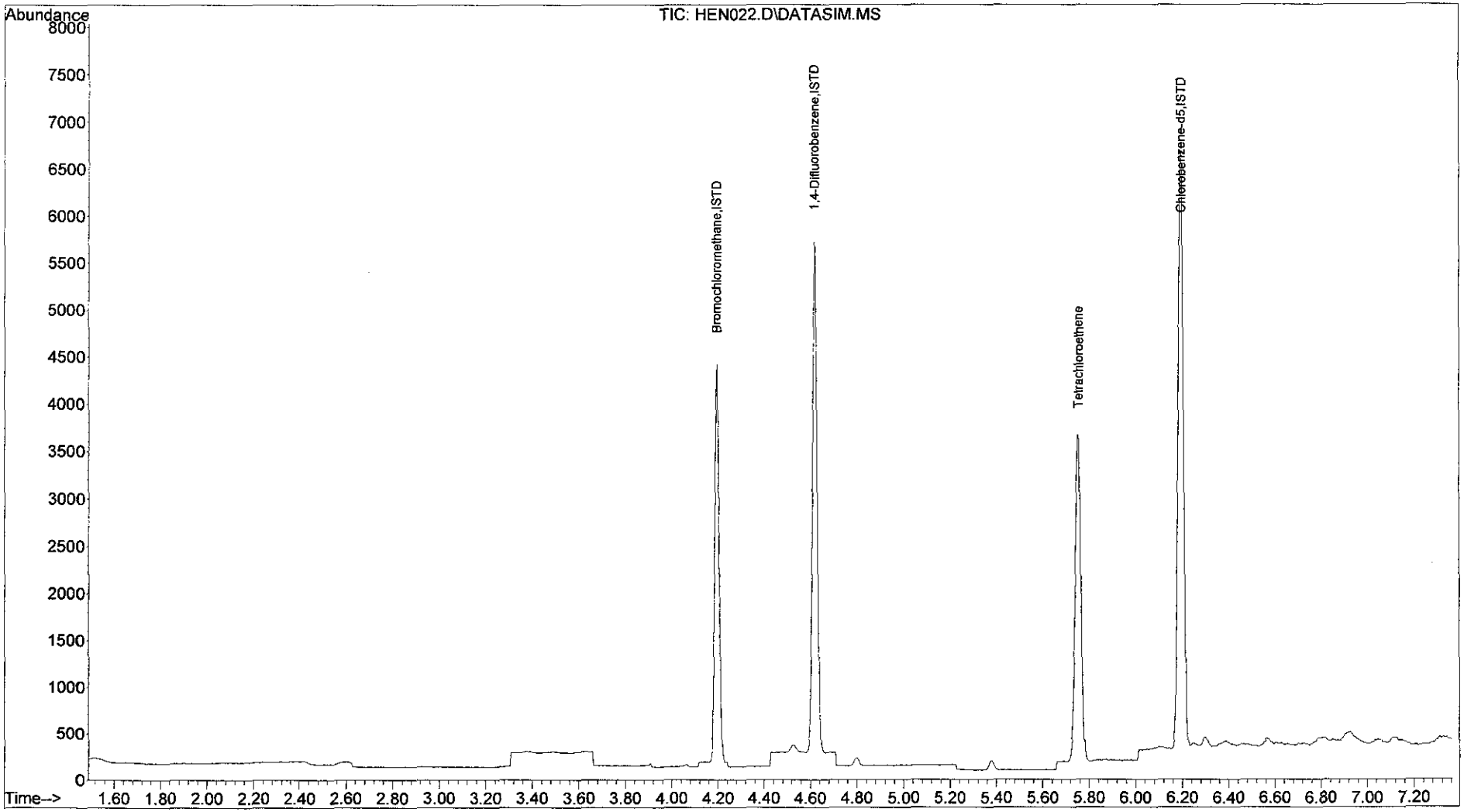
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.198	49	2285	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5269	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.197	117	5498	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
14) Tetrachloroethene	5.757	166	2003	11.08 ppbv	99

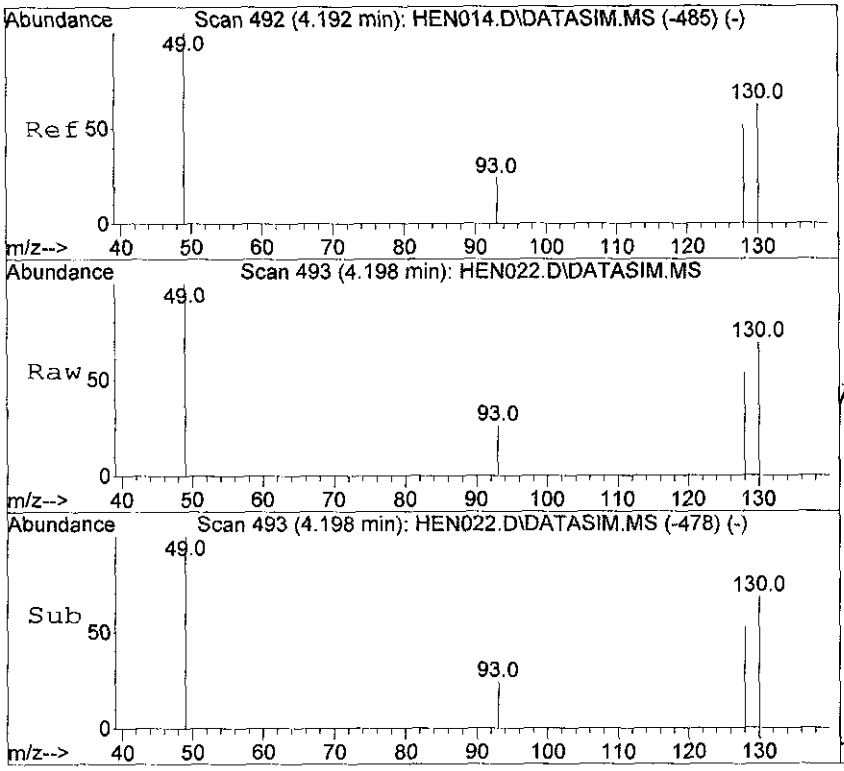
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN022.D
Acq On : 21 Mar 2012 13:14
Operator : SJT
Sample : 51103 \ BLDG6-SS-04
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 13:20:36 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

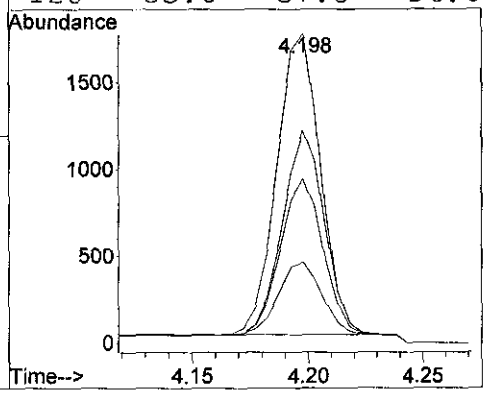


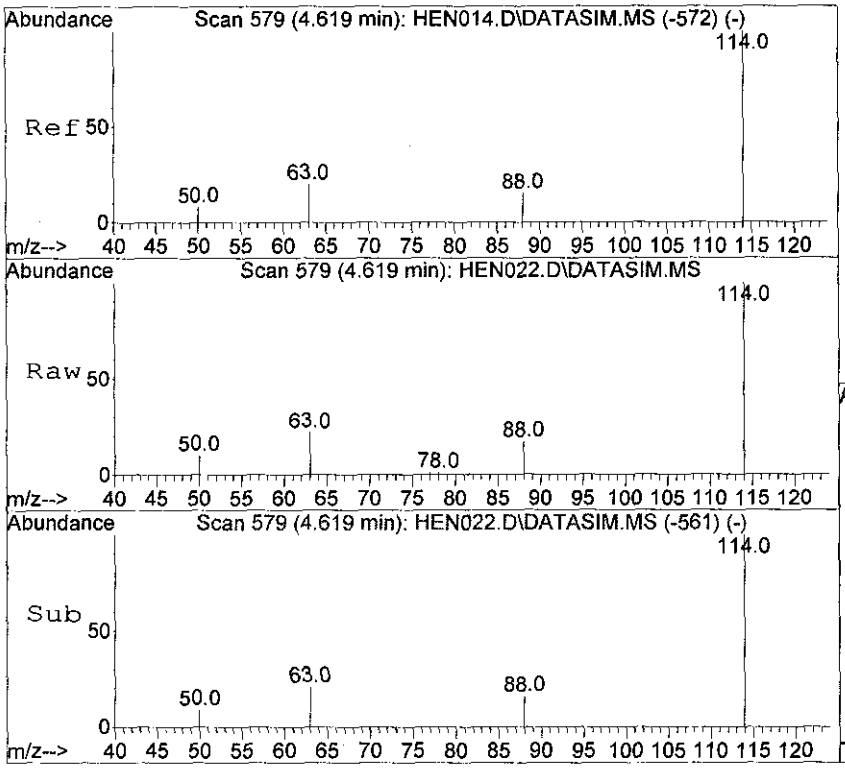


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.198 min Scan# 493
Delta R.T. 0.005 min
Lab File: HEN022.D
Acq: 21 Mar 2012 13:14

Tgt Ion: 49 Resp: 2285

Ion	Ratio	Lower	Upper
49	100		
130	68.6	46.5	69.7
93	26.1	19.0	28.6
128	53.0	37.8	56.6

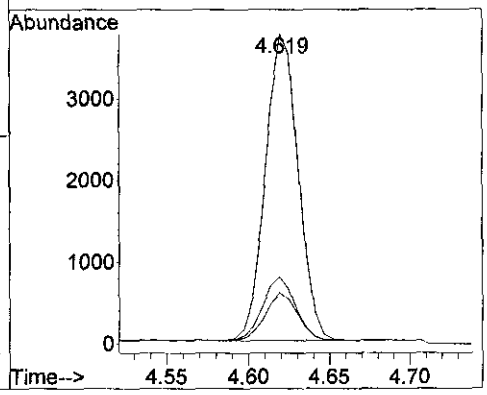


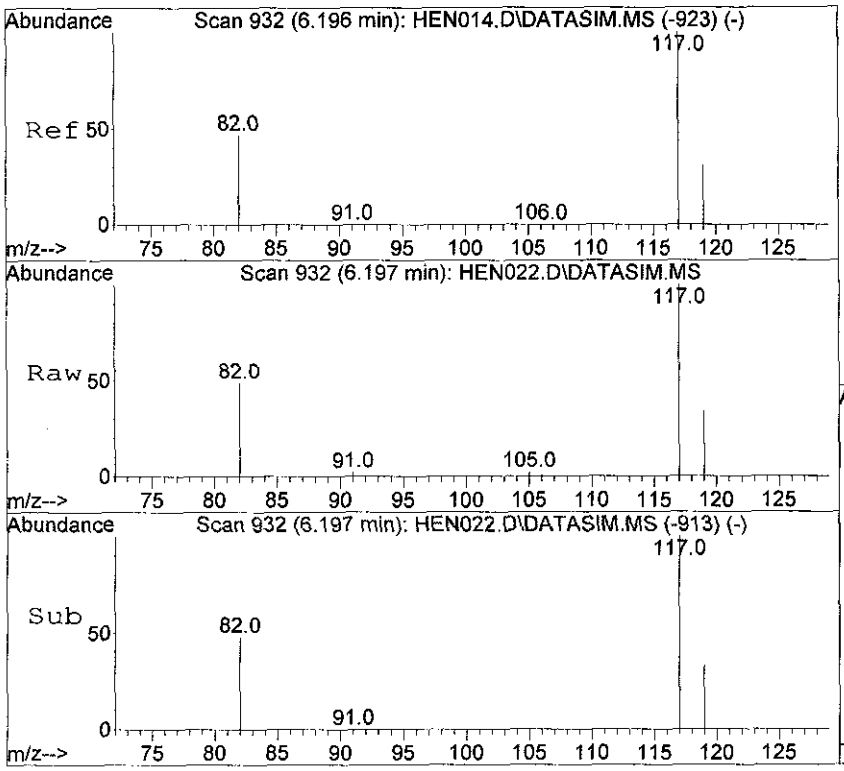


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN022.D
Acq: 21 Mar 2012 13:14

Tgt Ion:114 Resp: 5269

Ion	Ratio	Lower	Upper
114	100		
63	20.2	16.7	25.1
88	15.2	12.2	18.2

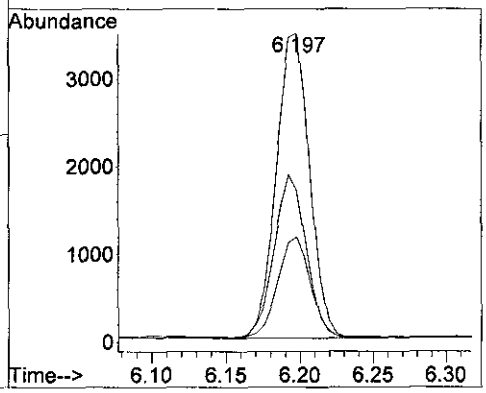


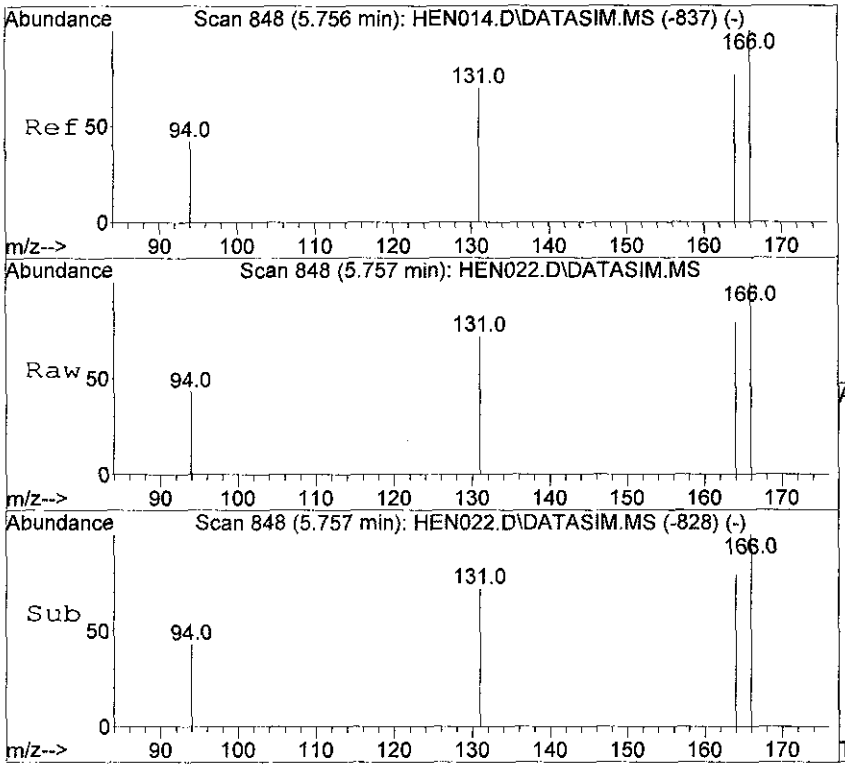


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN022.D
Acq: 21 Mar 2012 13:14

Tgt Ion:117 Resp: 5498

Ion	Ratio	Lower	Upper
117	100		
82	51.8	41.4	62.0
119	32.5	25.8	38.6

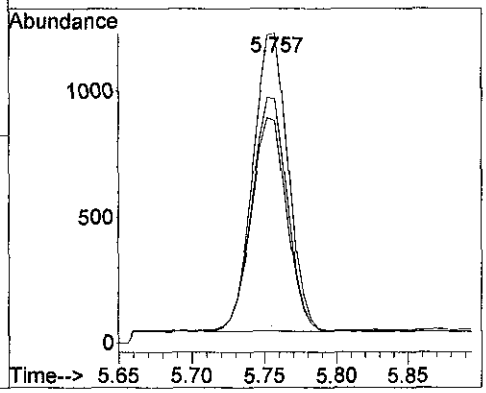




#14
Tetrachloroethene
Concen: 11.08 ppbv
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN022.D
Acq: 21 Mar 2012 13:14

Tgt Ion:166 Resp: 2003

Ion	Ratio	Lower	Upper
166	100		
164	78.8	62.5	93.7
131	71.8	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN023.D
Acq On : 21 Mar 2012 13:26
Operator : SJT
Sample : 51104 \ BLDG8-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 13:33:29 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

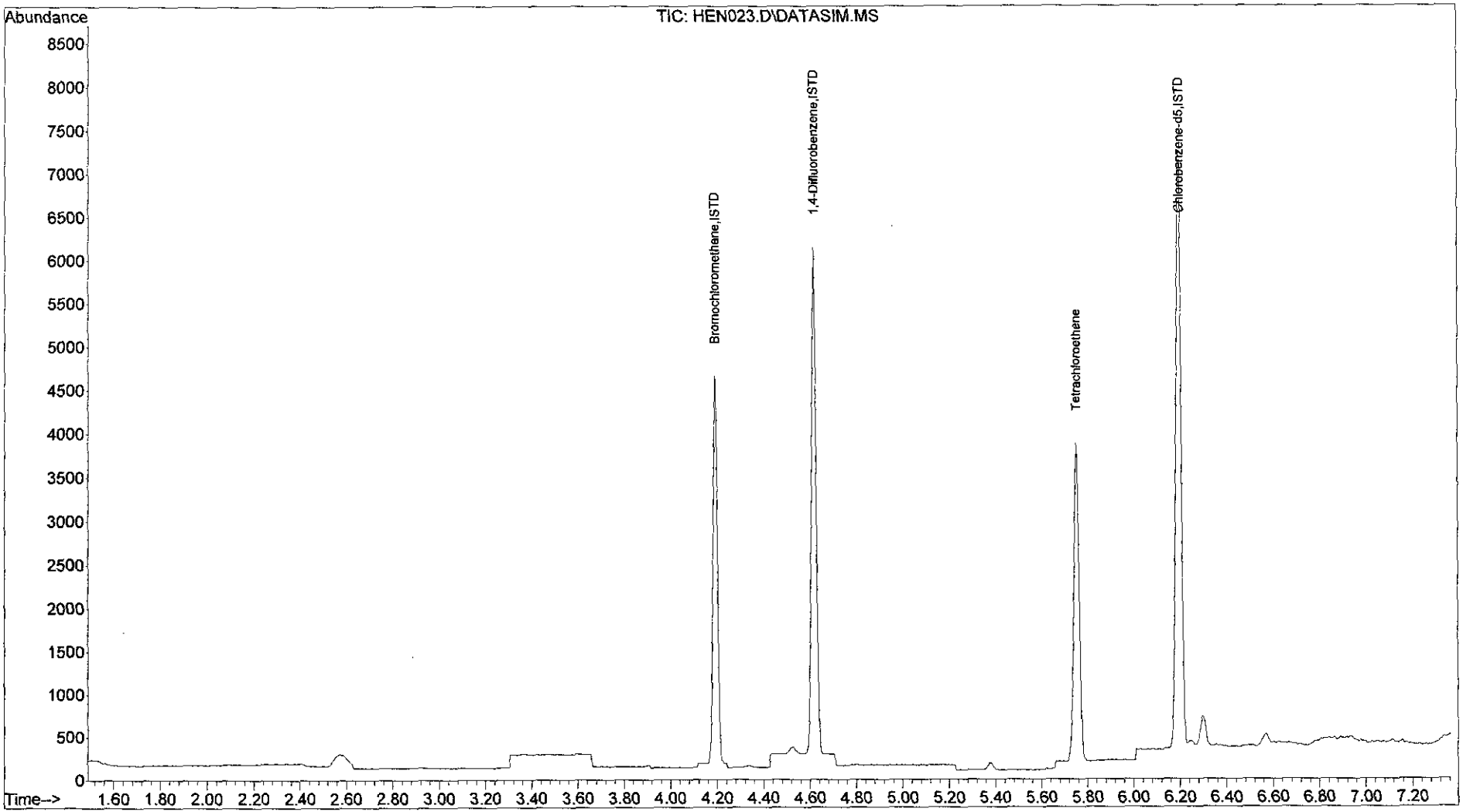
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.192	49	2431	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.620	114	5639	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.198	117	5962	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
14) Tetrachloroethene	5.752	166	2080m	10.61	ppbv	

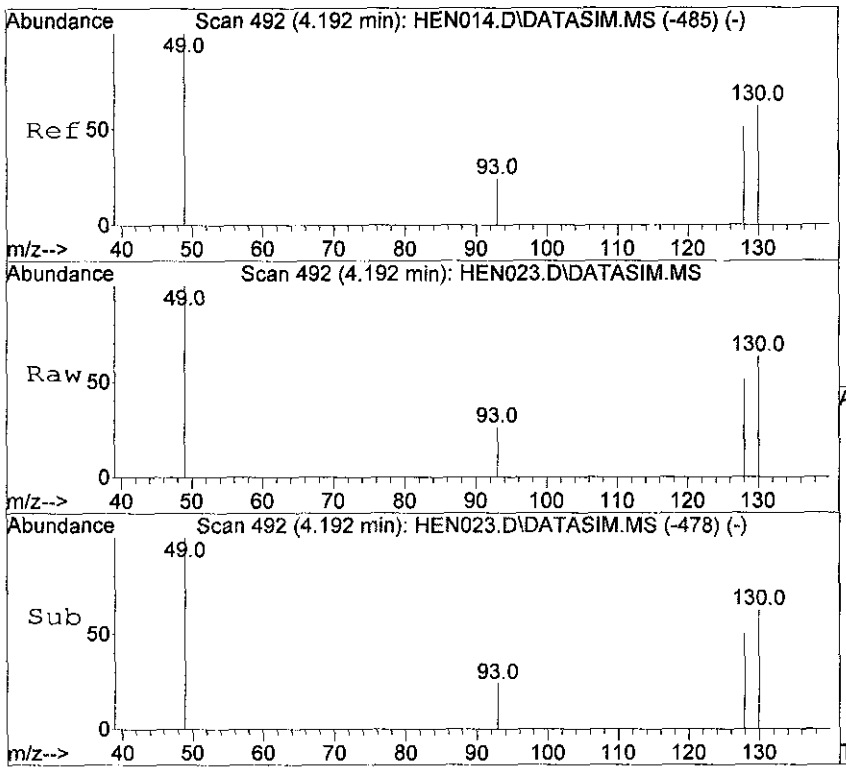
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN023.D
Acq On : 21 Mar 2012 13:26
Operator : SJT
Sample : 51104 \ BLDG8-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 13:33:29 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

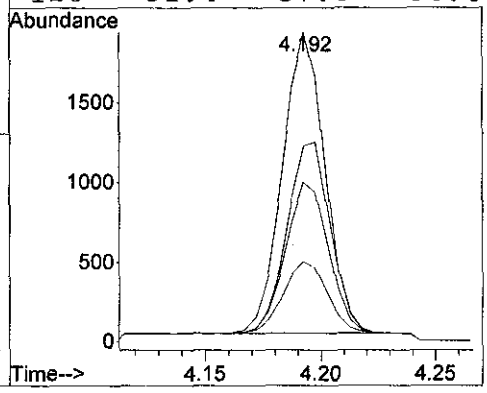


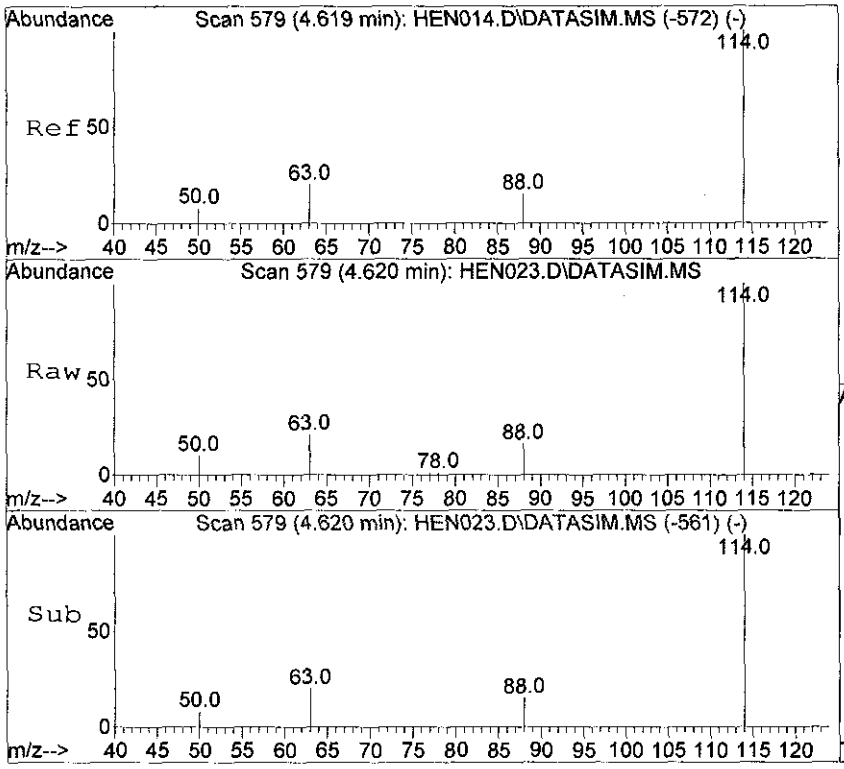


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN023.D
Acq: 21 Mar 2012 13:26

Tgt Ion: 49 Resp: 2431

Ion	Ratio	Lower	Upper
49	100		
130	63.2	46.5	69.7
93	25.9	19.0	28.6
128	51.4	37.8	56.6

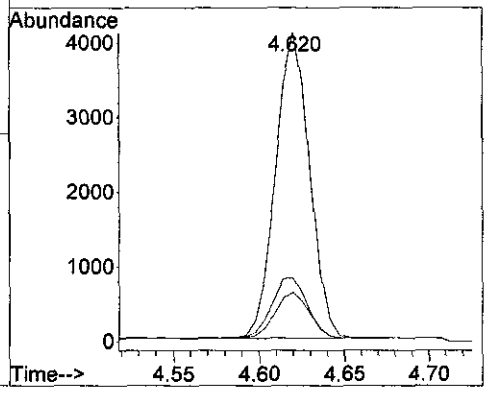


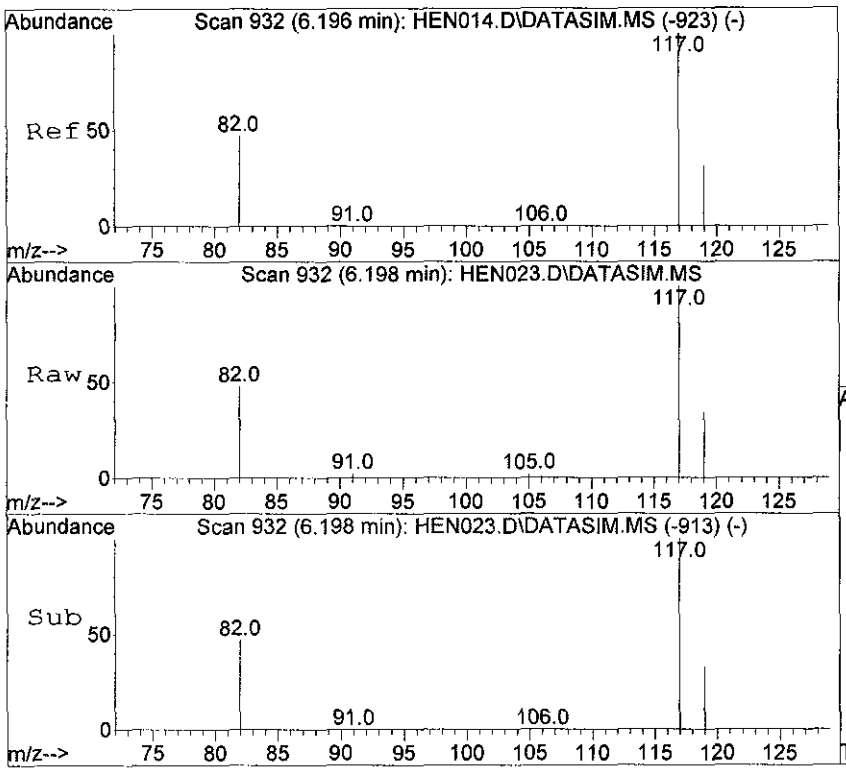


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.620 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN023.D
Acq: 21 Mar 2012 13:26

Tgt Ion:114 Resp: 5639

Ion	Ratio	Lower	Upper
114	100		
63	20.6	16.7	25.1
88	15.1	12.2	18.2

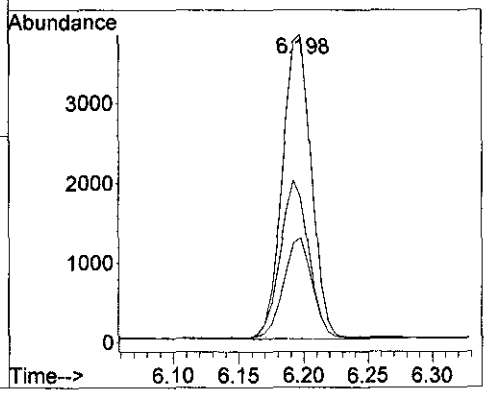


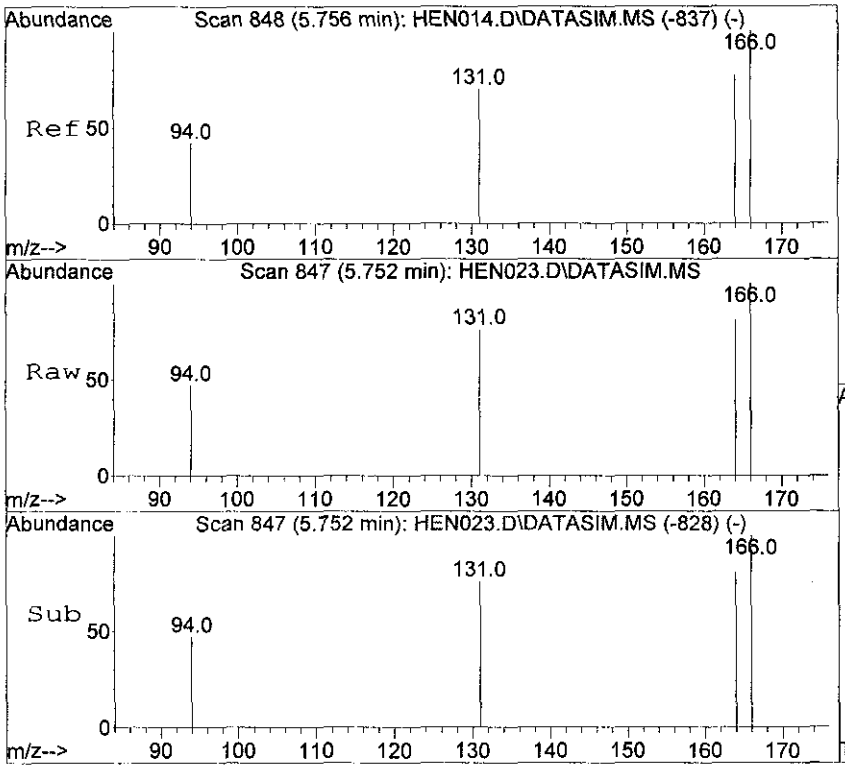


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.198 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN023.D
Acq: 21 Mar 2012 13:26

Tgt Ion:117 Resp: 5962

Ion	Ratio	Lower	Upper
117	100		
82	50.4	41.4	62.0
119	33.0	25.8	38.6

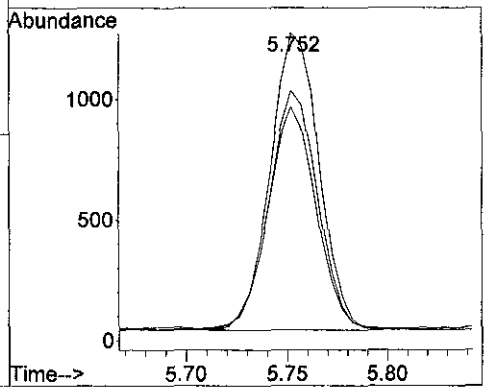




#14
Tetrachloroethene
Concen: 10.61 ppbv m
RT: 5.752 min Scan# 847
Delta R.T. -0.004 min
Lab File: HEN023.D
Acq: 21 Mar 2012 13:26

Tgt Ion:166 Resp: 2080

Ion	Ratio	Lower	Upper
166	100		
164	79.5	62.5	93.7
131	72.6	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN024.D
Acq On : 21 Mar 2012 13:37
Operator : SJT
Sample : 51105 \ BLDG8-SS-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 13:45:03 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

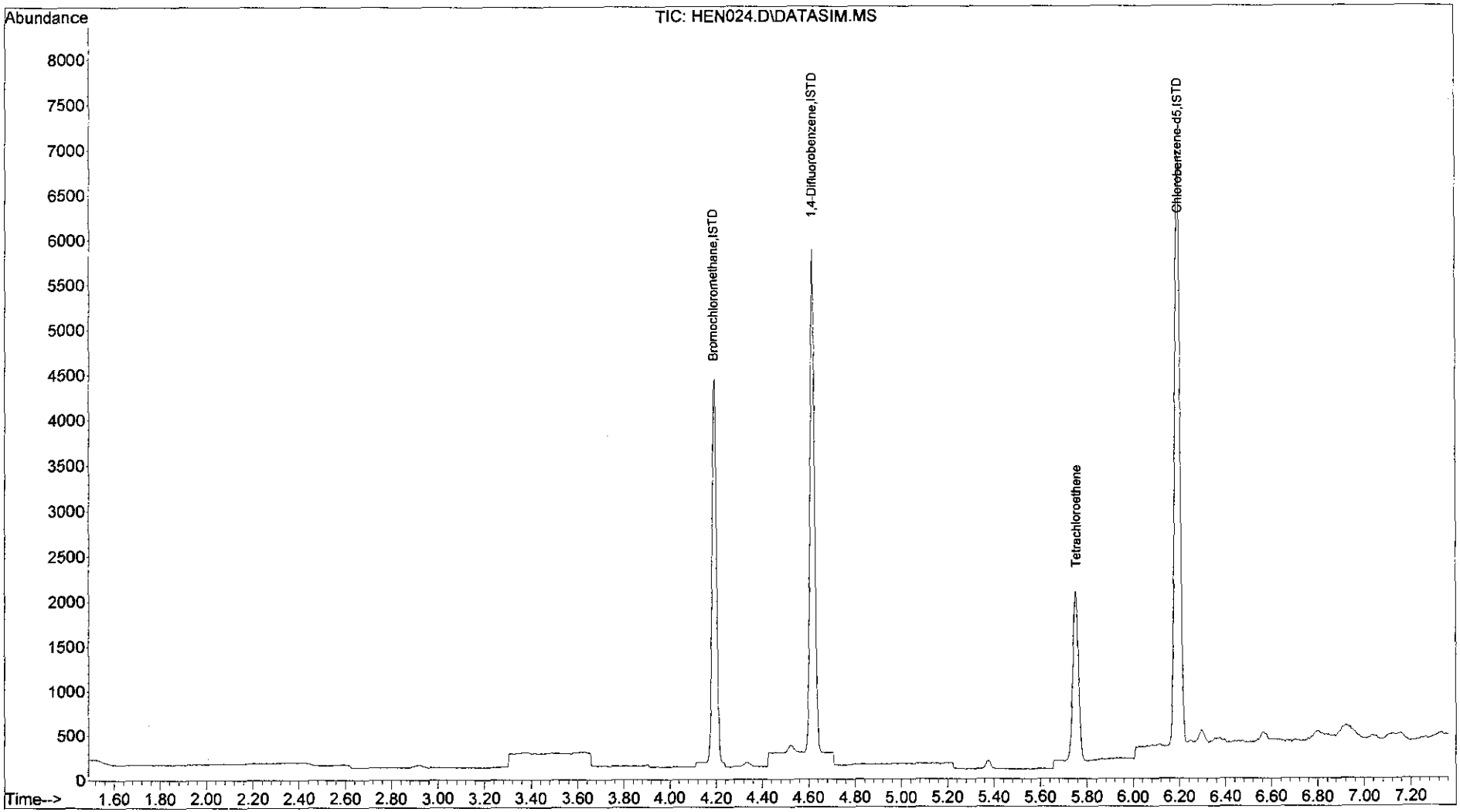
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.193	49	2316	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.620	114	5402	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.198	117	5739	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
14) Tetrachloroethene	5.757	166	1088m	5.77 ppbv	

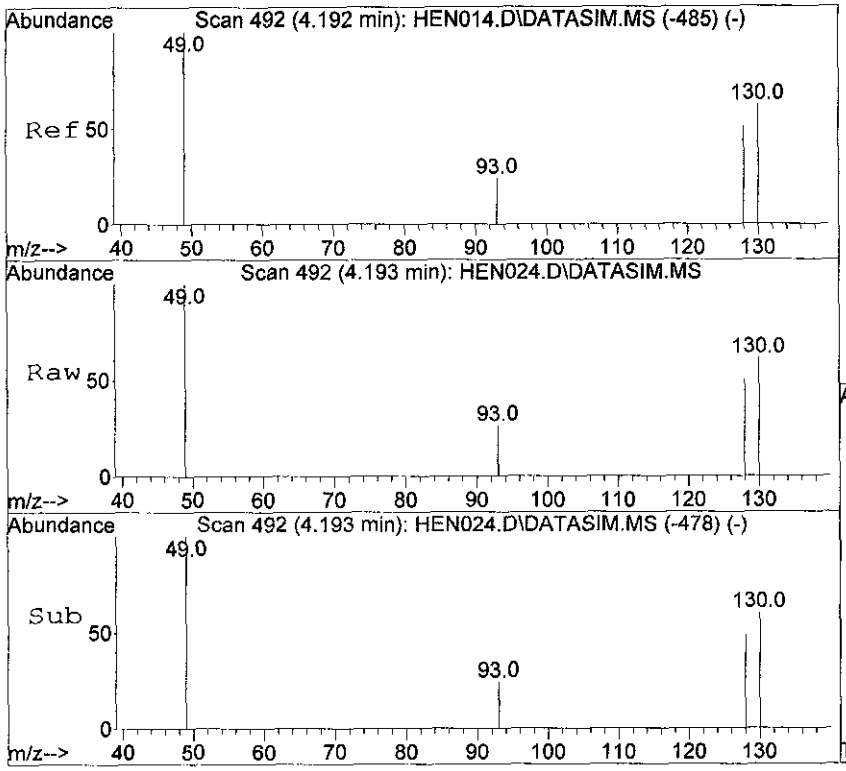
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN024.D
Acq On : 21 Mar 2012 13:37
Operator : SJT
Sample : 51105 \ BLDG8-SS-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 13:45:03 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

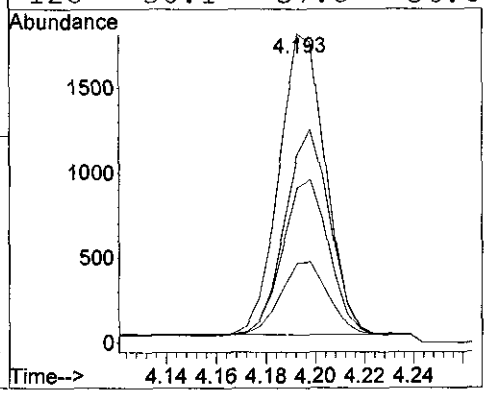


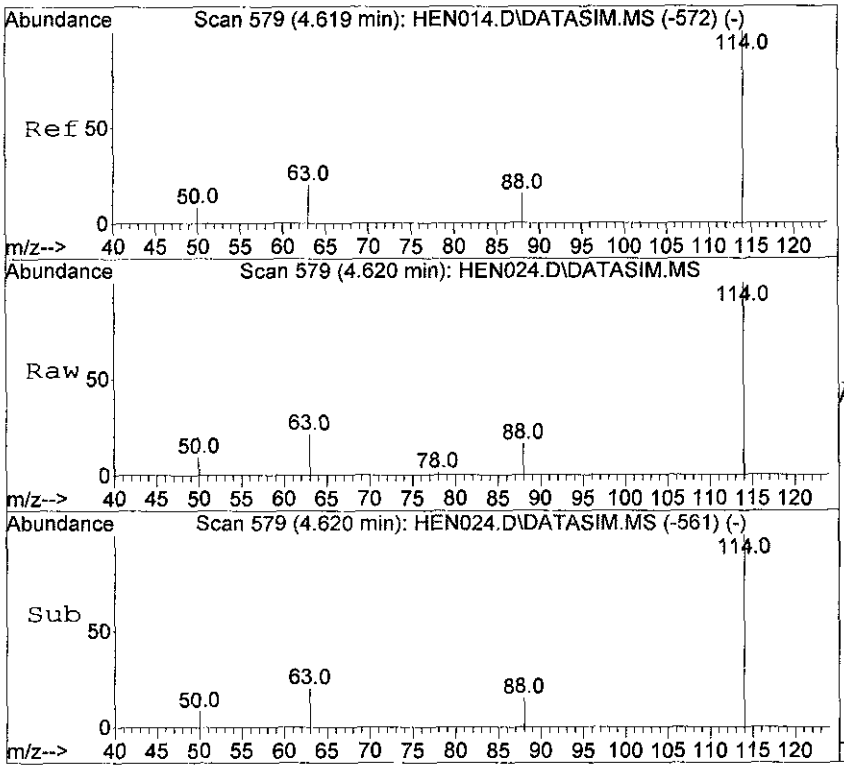


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.193 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN024.D
Acq: 21 Mar 2012 13:37

Tgt Ion: 49 Resp: 2316

Ion	Ratio	Lower	Upper
49	100		
130	60.8	46.5	69.7
93	25.8	19.0	28.6
128	50.1	37.8	56.6

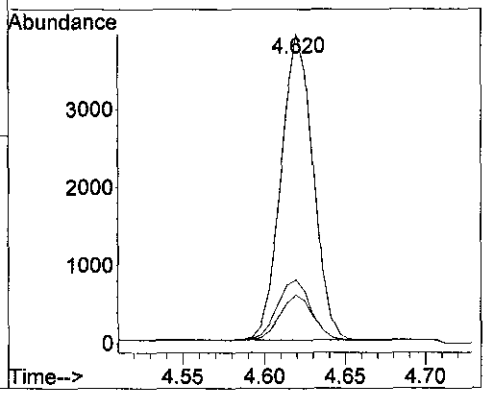


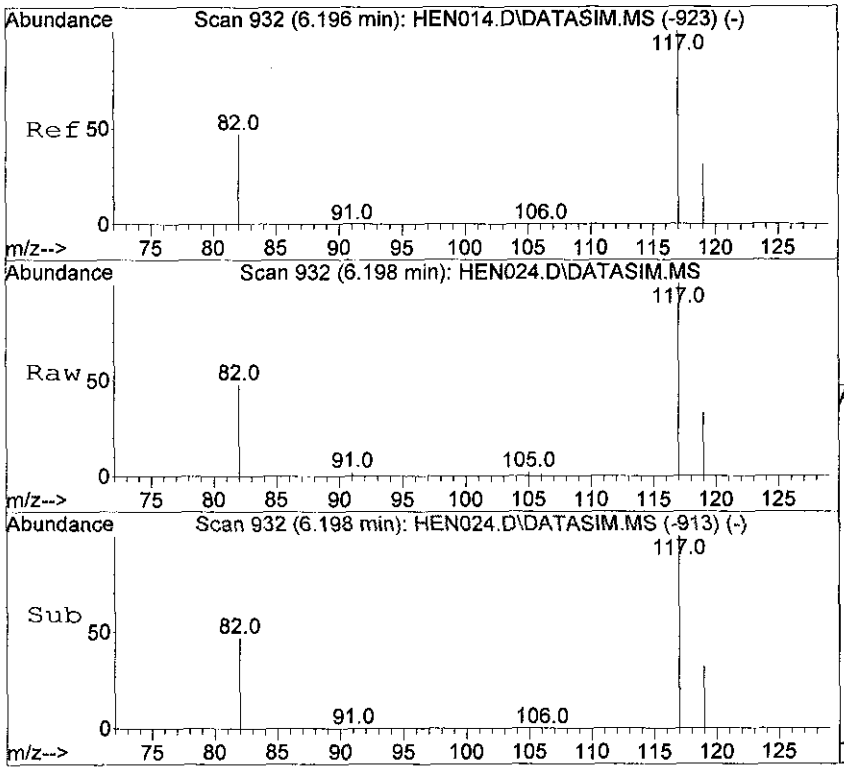


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.620 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN024.D
Acq: 21 Mar 2012 13:37

Tgt Ion:114 Resp: 5402

Ion	Ratio	Lower	Upper
114	100		
63	20.1	16.7	25.1
88	15.0	12.2	18.2

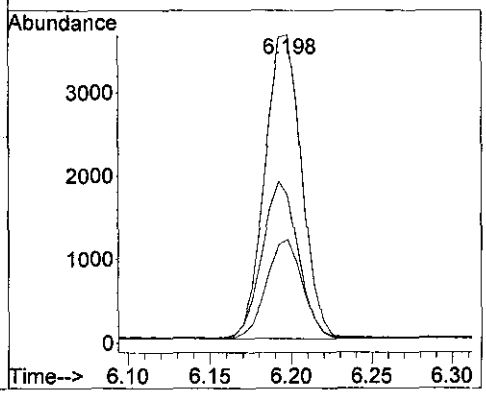


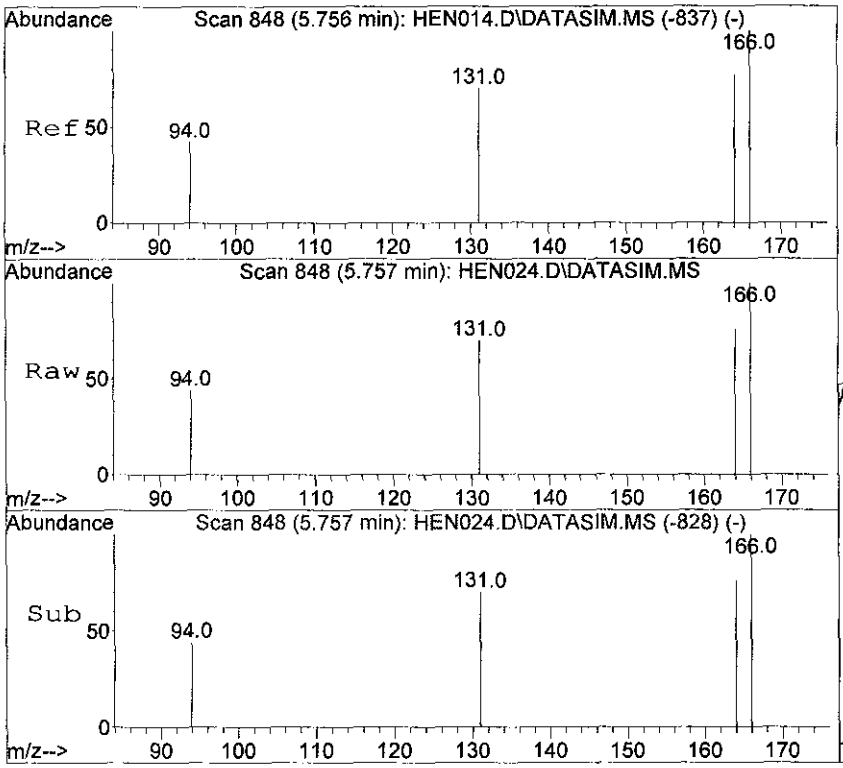


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.198 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN024.D
Acq: 21 Mar 2012 13:37

Tgt Ion:117 Resp: 5739

Ion	Ratio	Lower	Upper
117	100		
82	49.7	41.4	62.0
119	32.1	25.8	38.6

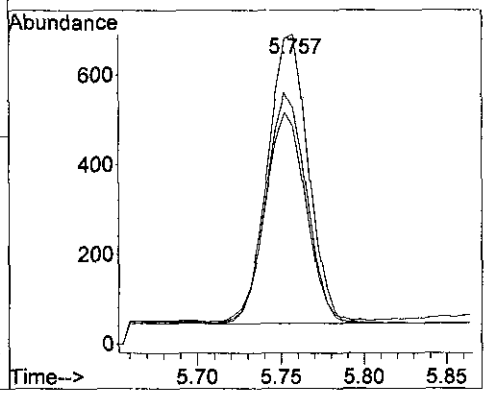




#14
Tetrachloroethene
Concen: 5.77 ppbv m
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN024.D
Acq: 21 Mar 2012 13:37

Tgt Ion:166 Resp: 1088

Ion	Ratio	Lower	Upper
166	100		
164	80.1	62.5	93.7
131	72.2	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN025.D
Acq On : 21 Mar 2012 13:49
Operator : SJT
Sample : 51106 \ BLDG8-SS-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 14:07:40 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

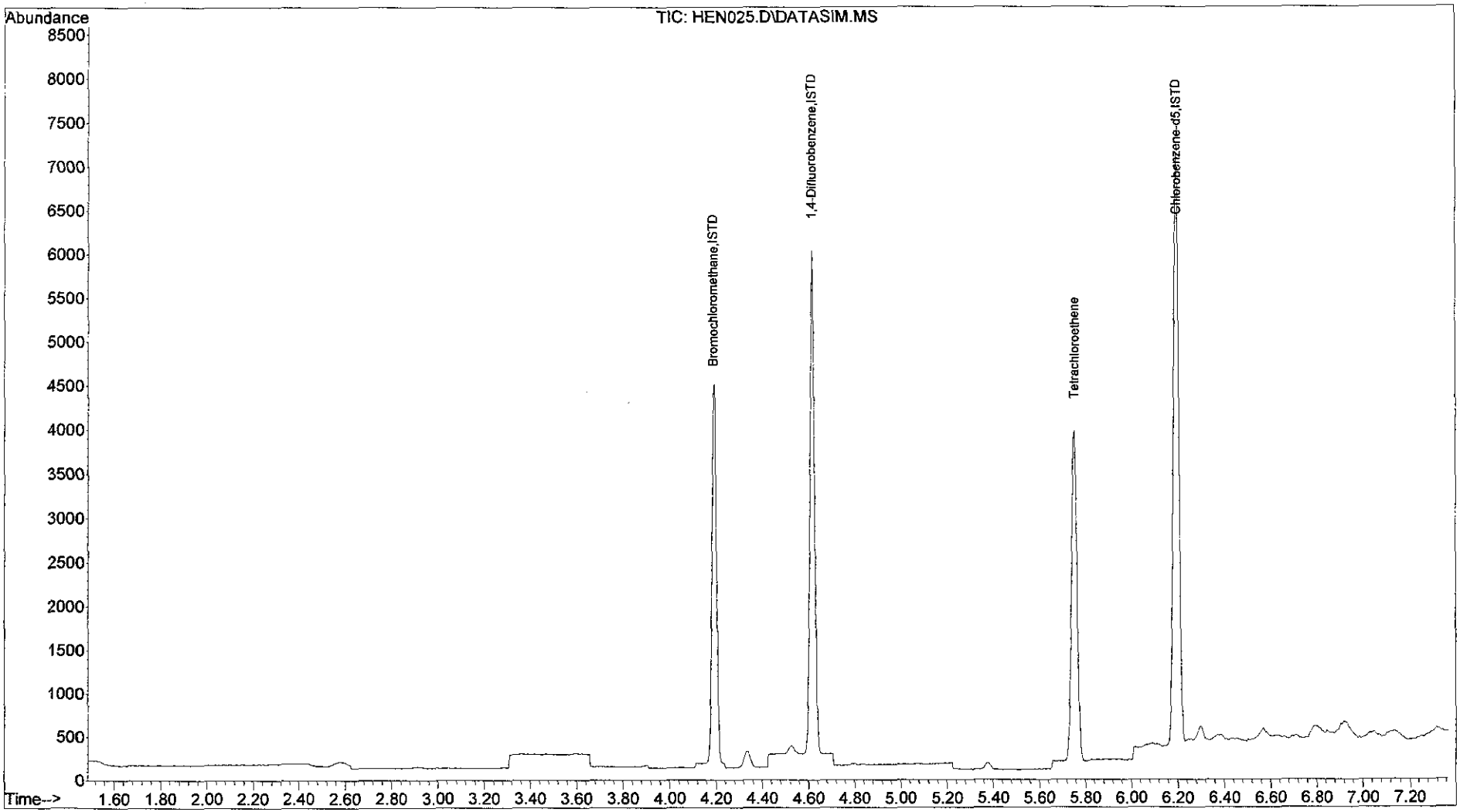
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.191	49	2381	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.618	114	5488	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	5809	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
14) Tetrachloroethene	5.756	166	2193	11.48	ppbv	99

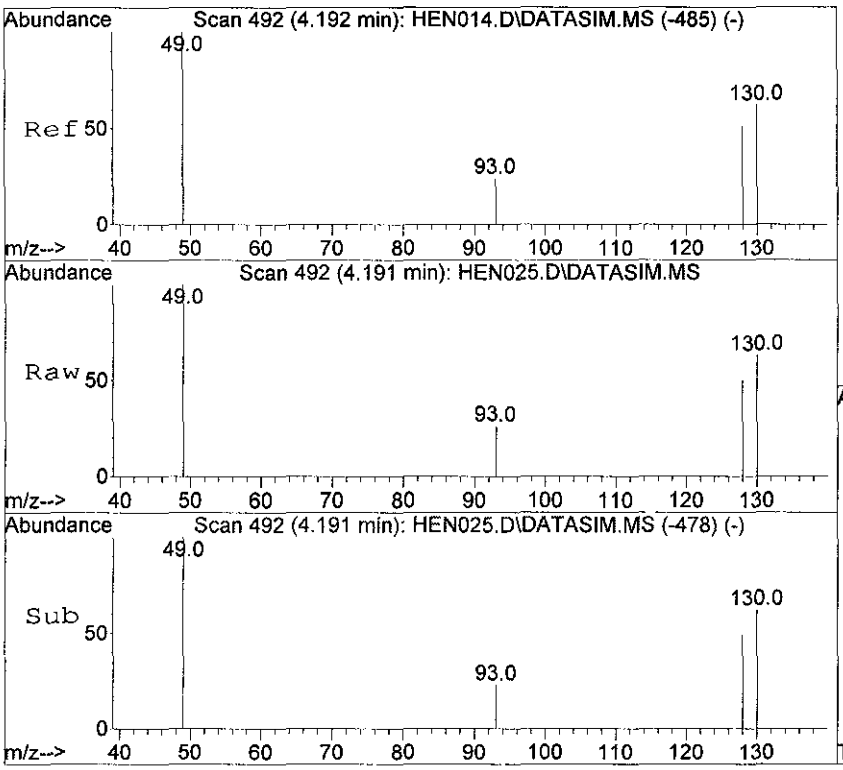
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN025.D
Acq On : 21 Mar 2012 13:49
Operator : SJT
Sample : 51106 \ BLDG8-SS-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 14:07:40 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

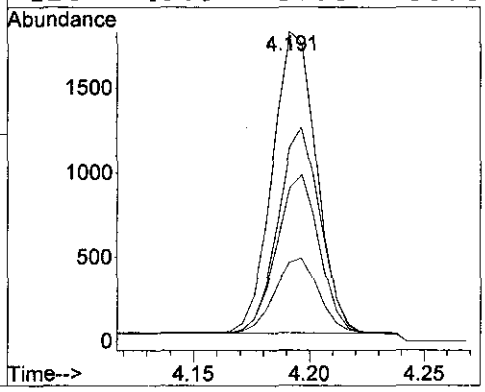


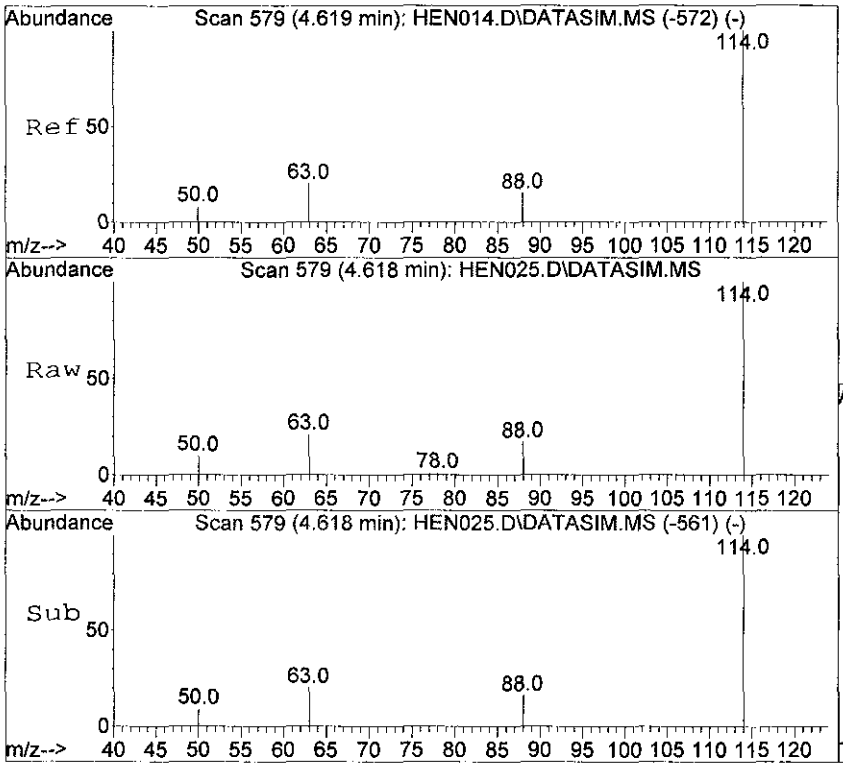


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.191 min Scan# 492
Delta R.T. -0.001 min
Lab File: HEN025.D
Acq: 21 Mar 2012 13:49

Tgt Ion: 49 Resp: 2381

Ion	Ratio	Lower	Upper
49	100		
130	62.6	46.5	69.7
93	25.6	19.0	28.6
128	49.9	37.8	56.6

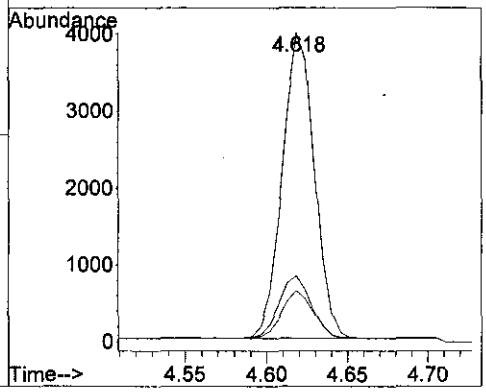


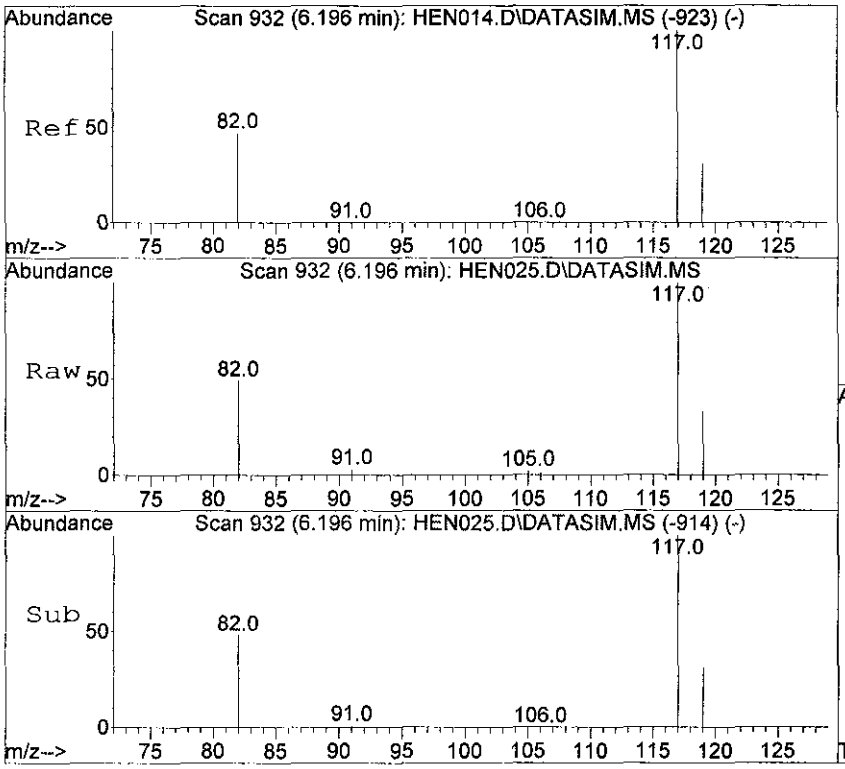


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.618 min Scan# 579
Delta R.T. -0.001 min
Lab File: HEN025.D
Acq: 21 Mar 2012 13:49

Tgt Ion:114 Resp: 5488

Ion	Ratio	Lower	Upper
114	100		
63	20.5	16.7	25.1
88	15.2	12.2	18.2

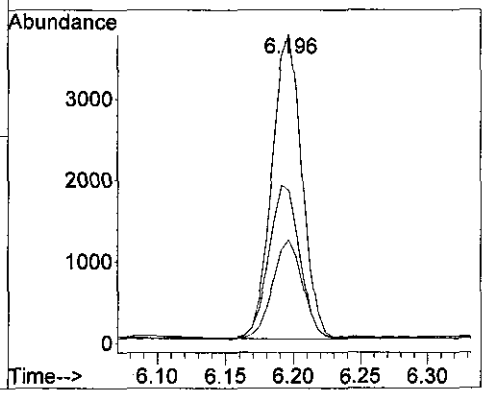


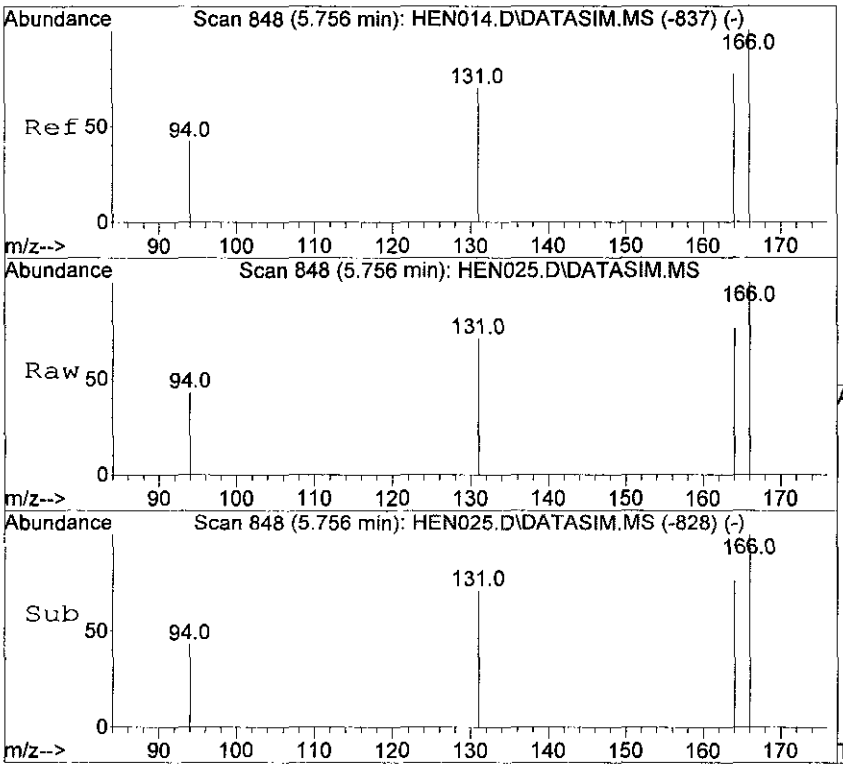


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. -0.000 min
Lab File: HEN025.D
Acq: 21 Mar 2012 13:49

Tgt Ion:117 Resp: 5809

Ion	Ratio	Lower	Upper
117	100		
82	51.7	41.4	62.0
119	32.2	25.8	38.6

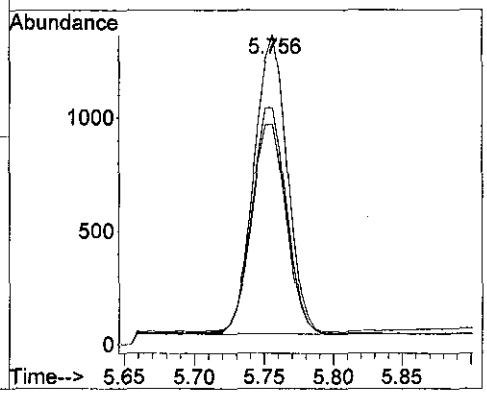




#14
Tetrachloroethene
Concen: 11.48 ppbv
RT: 5.756 min Scan# 848
Delta R.T. -0.000 min
Lab File: HEN025.D
Acq: 21 Mar 2012 13:49

Tgt Ion:166 Resp: 2193

Ion	Ratio	Lower	Upper
166	100		
164	78.7	62.5	93.7
131	70.9	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN026.D
Acq On : 21 Mar 2012 16:37
Operator : SJT
Sample : 51107 \ BLDG H-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 16:51:06 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

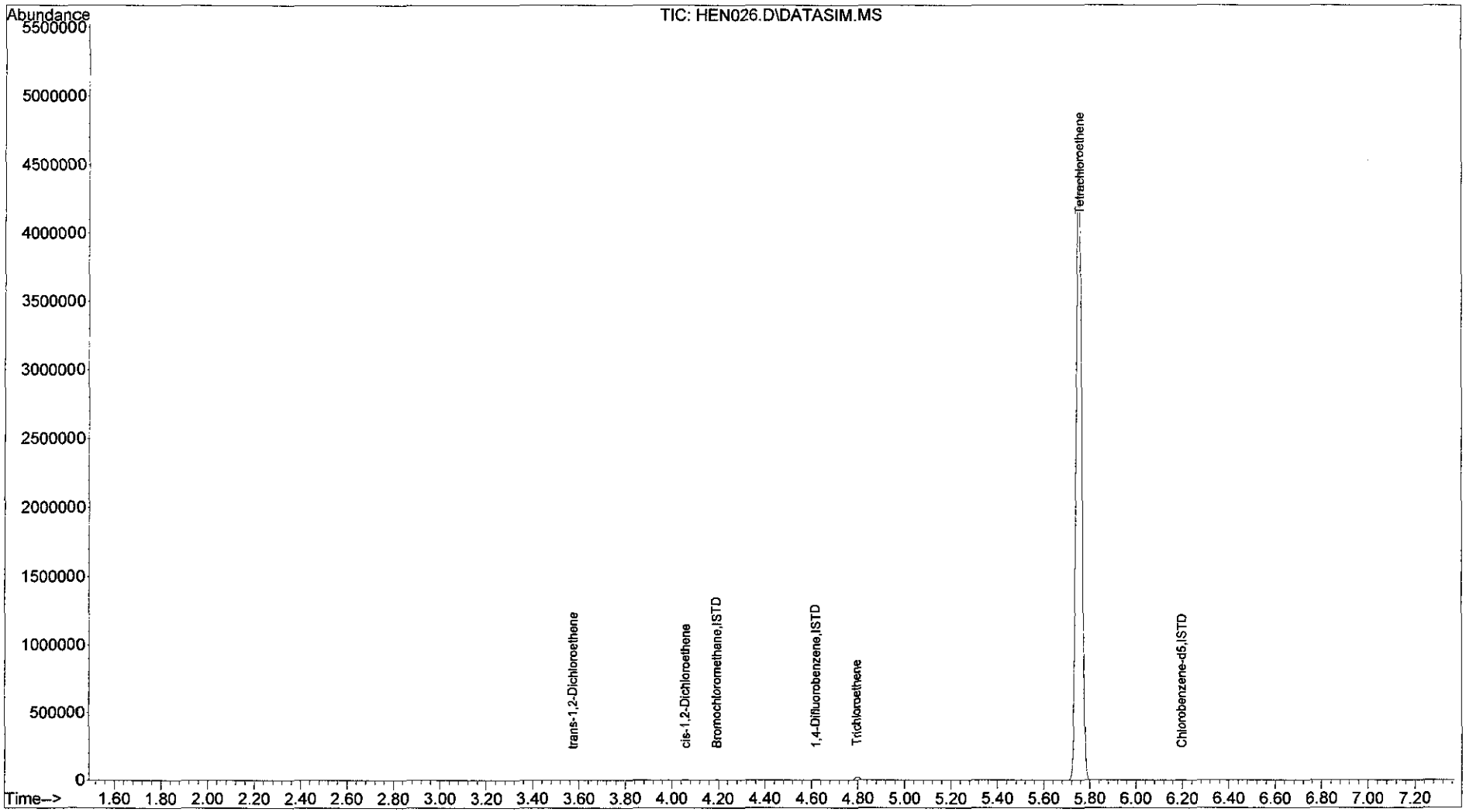
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.192	49	2327	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5381	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.197	117	5481	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
5) trans-1,2-Dichloroethene	3.575	61	111m	0.71 ppbv	
7) cis-1,2-Dichloroethene	4.059	61	1903m	12.74 ppbv	
11) Trichloroethene	4.796	130	11081	76.49 ppbv	99
14) Tetrachloroethene	5.757	166	2722902	15110.88 ppbv	99

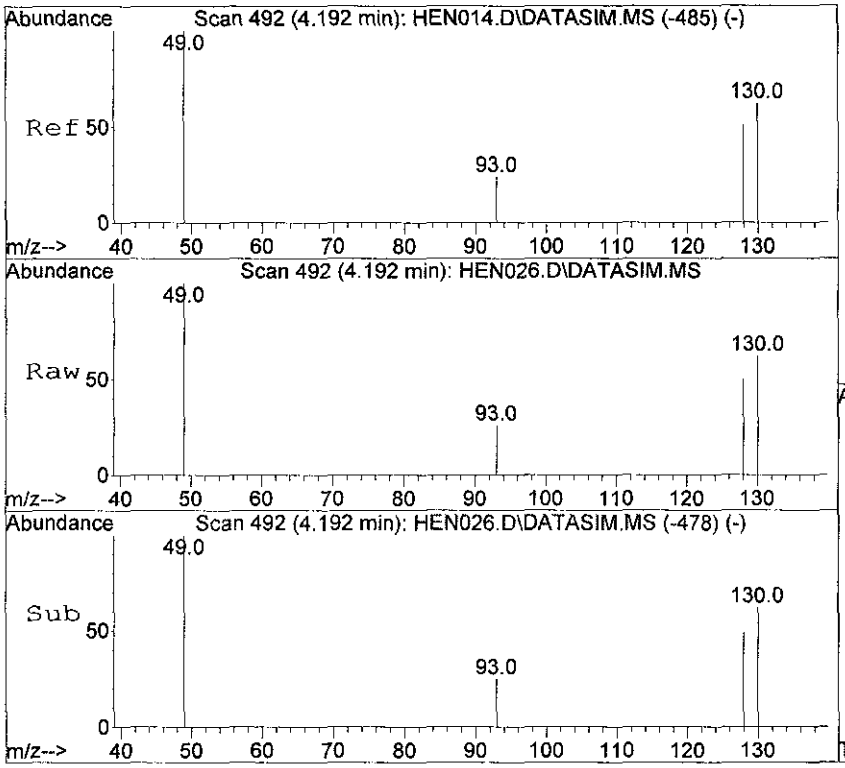
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN026.D
Acq On : 21 Mar 2012 16:37
Operator : SJT
Sample : 51107 \ BLDG H-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 16:51:06 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

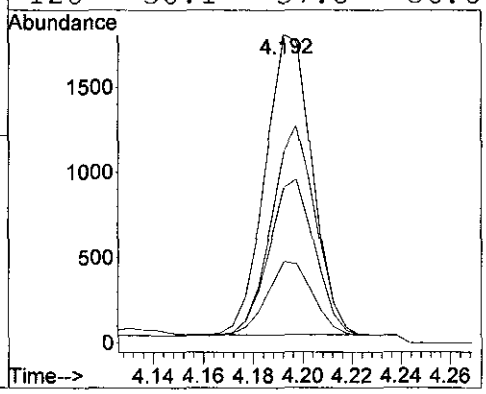


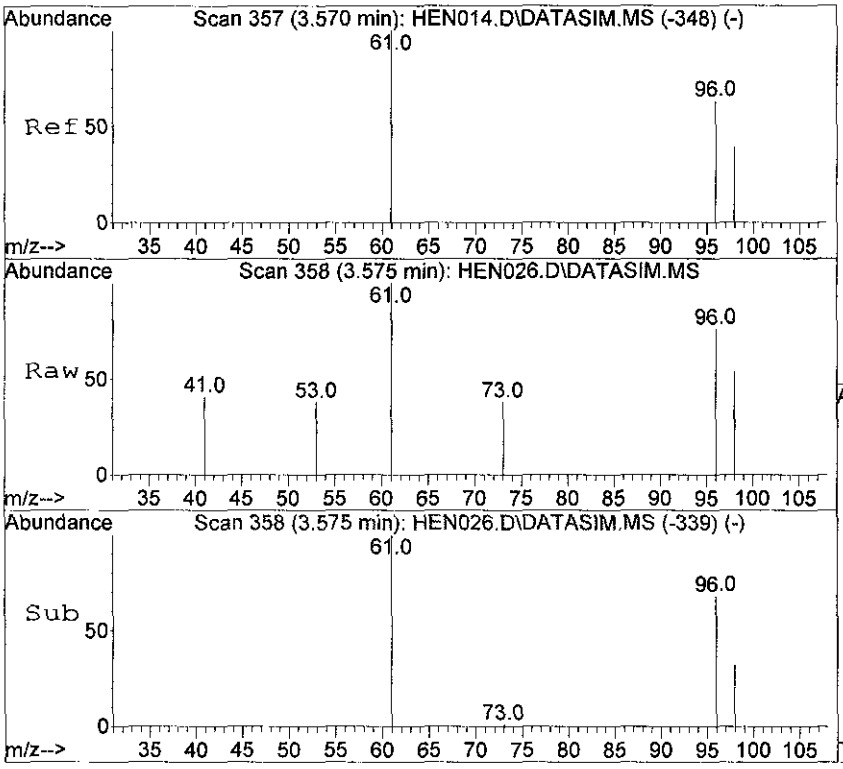


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. -0.000 min
Lab File: HEN026.D
Acq: 21 Mar 2012 16:37

Tgt Ion: 49 Resp: 2327

Ion	Ratio	Lower	Upper
49	100		
130	62.0	46.5	69.7
93	26.3	19.0	28.6
128	50.1	37.8	56.6

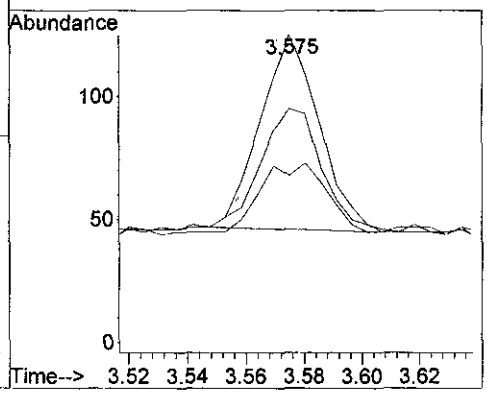


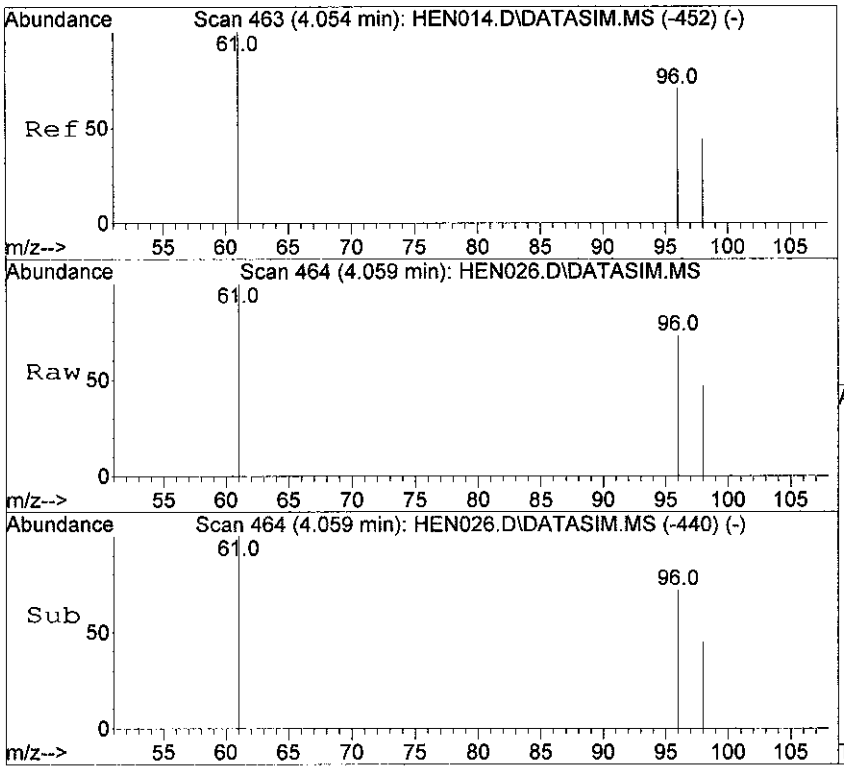


#5
trans-1,2-Dichloroethene
Concen: 0.71 ppbv m
RT: 3.575 min Scan# 358
Delta R.T. 0.005 min
Lab File: HEN026.D
Acq: 21 Mar 2012 16:37

Tgt Ion: 61 Resp: 111

Ion	Ratio	Lower	Upper
61	100		
96	73.9	51.3	76.9
98	44.1	32.7	49.1

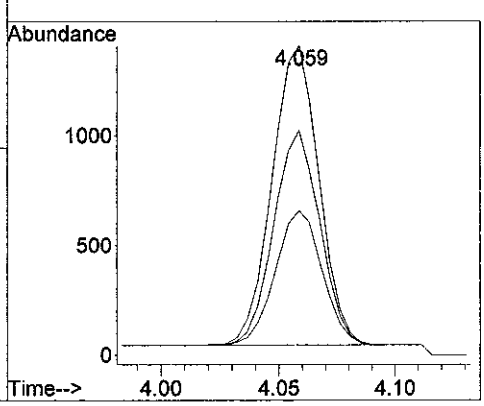


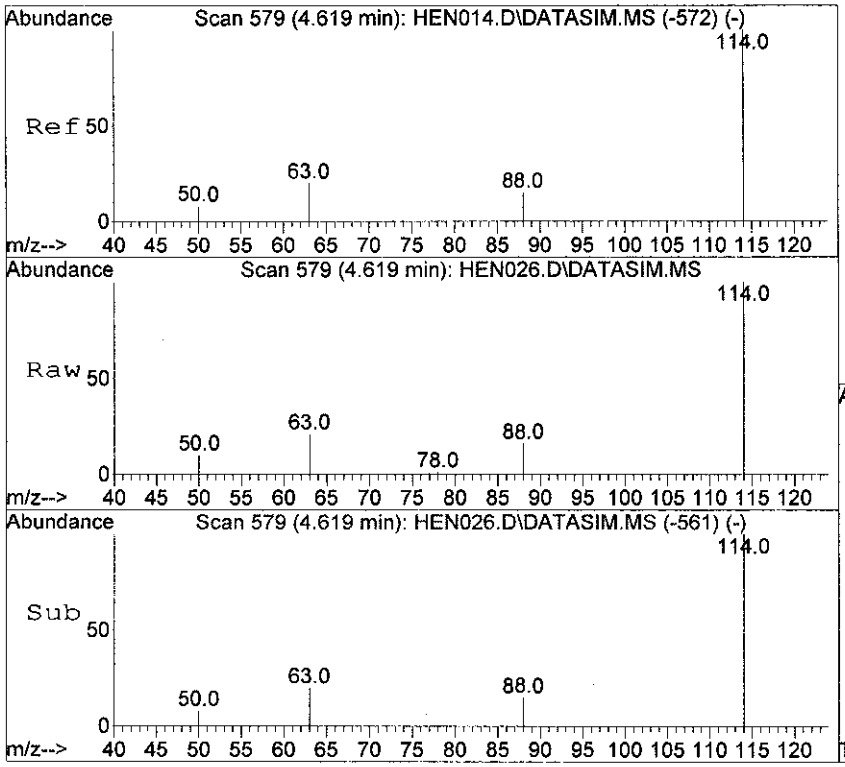


#7
cis-1,2-Dichloroethene
Concen: 12.74 ppbv m
RT: 4.059 min Scan# 464
Delta R.T. 0.004 min
Lab File: HEN026.D
Acq: 21 Mar 2012 16:37

Tgt Ion: 61 Resp: 1903

Ion	Ratio	Lower	Upper
61	100		
96	84.1	56.2	84.4
98	58.2	36.0	54.0#

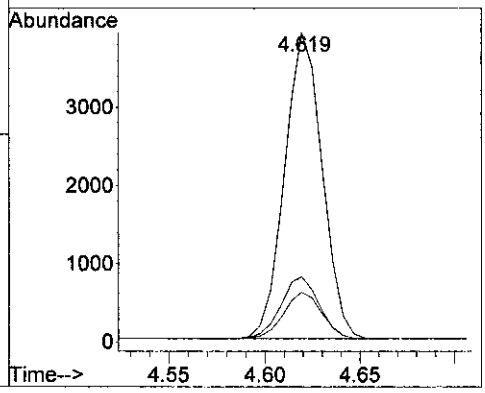


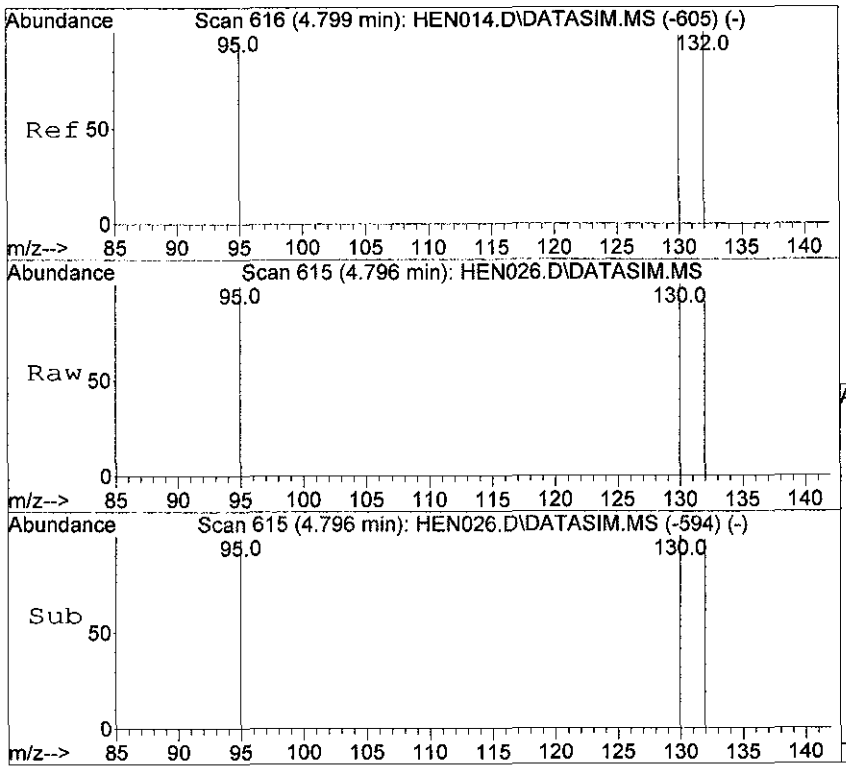


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. -0.000 min
Lab File: HEN026.D
Acq: 21 Mar 2012 16:37

Tgt Ion:114 Resp: 5381

Ion	Ratio	Lower	Upper
114	100		
63	20.5	16.7	25.1
88	15.4	12.2	18.2

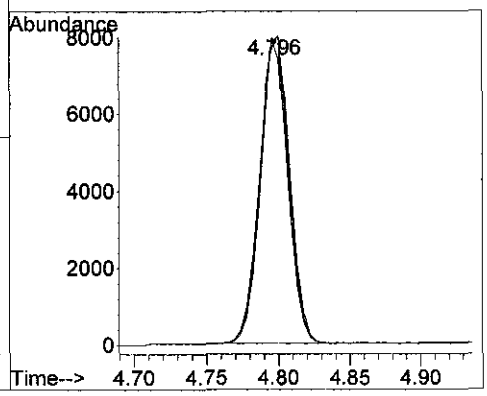


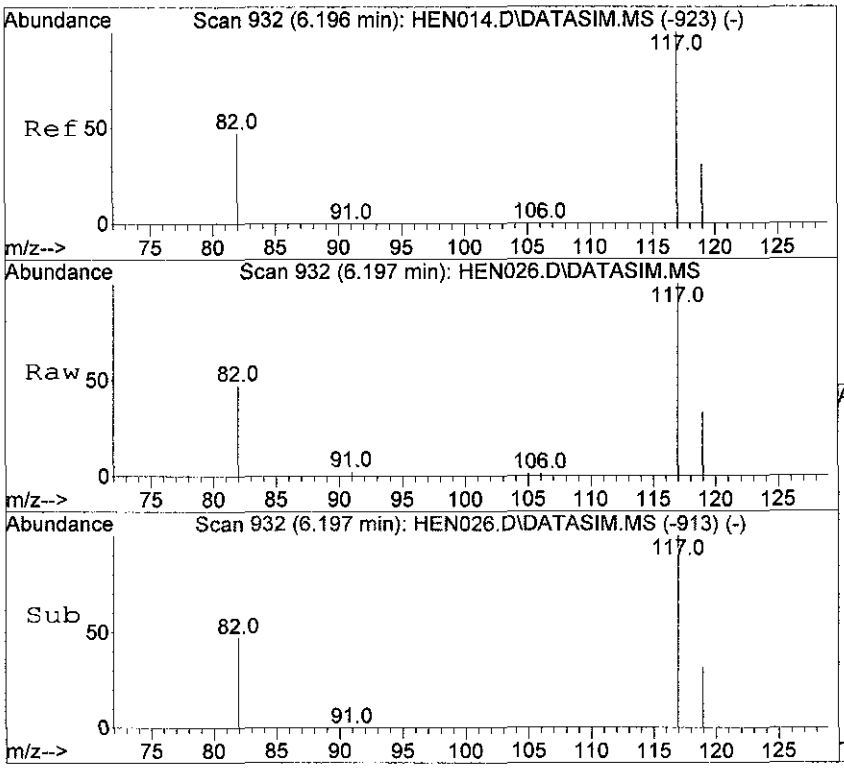


#11
Trichloroethene
Concen: 76.49 ppbv
RT: 4.796 min Scan# 615
Delta R.T. -0.003 min
Lab File: HEN026.D
Acq: 21 Mar 2012 16:37

Tgt Ion:130 Resp: 11081

Ion	Ratio	Lower	Upper
130	100		
132	100.4	80.4	120.6
95	97.4	78.6	118.0

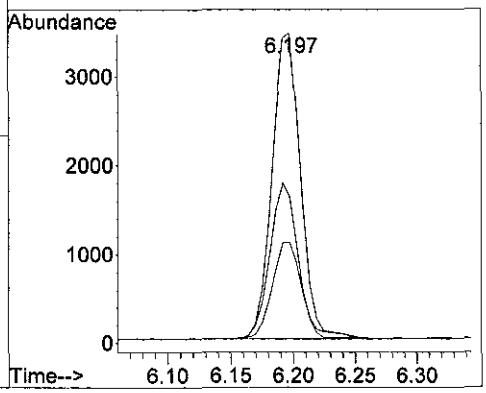


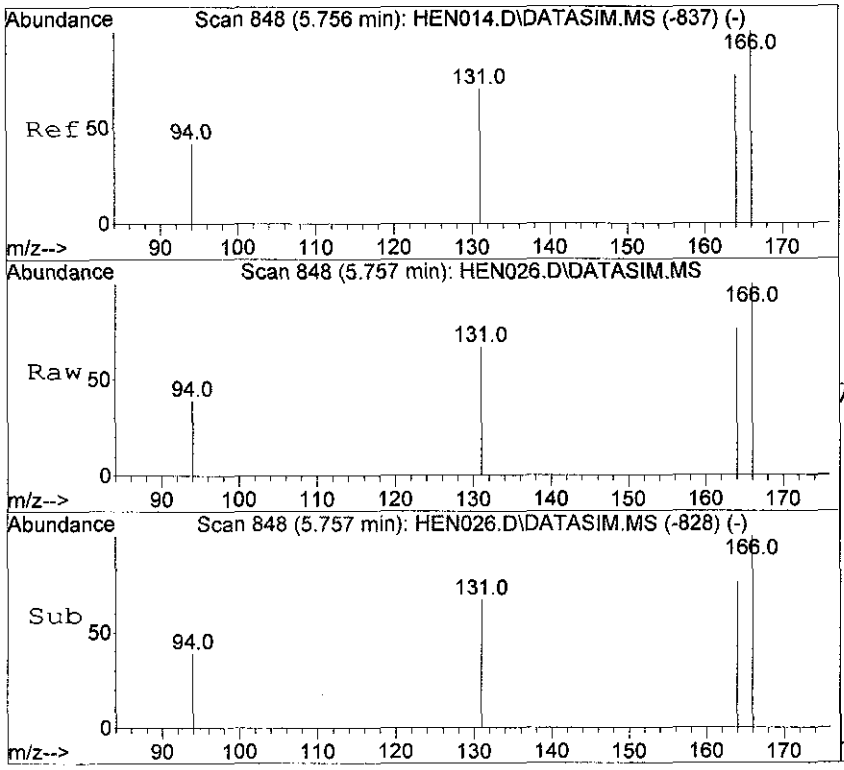


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN026.D
Acq: 21 Mar 2012 16:37

Tgt Ion:117 Resp: 5481

Ion	Ratio	Lower	Upper
117	100		
82	49.5	41.4	62.0
119	34.0	25.8	38.6

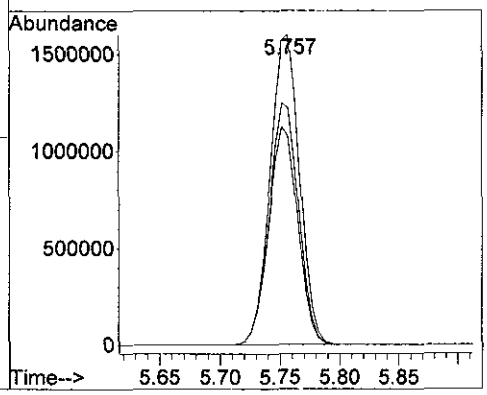




#14
Tetrachloroethene
Concen: 15110.88 ppbv
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN026.D
Acq: 21 Mar 2012 16:37

Tgt Ion:166 Resp: 2722902

Ion	Ratio	Lower	Upper
166	100		
164	77.9	62.5	93.7
131	70.0	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN027.D
Acq On : 21 Mar 2012 17:00
Operator : SJT
Sample : 51107 \ BLDG H-SS-01 10X
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 10

Quant Time: Mar 21 17:08:40 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

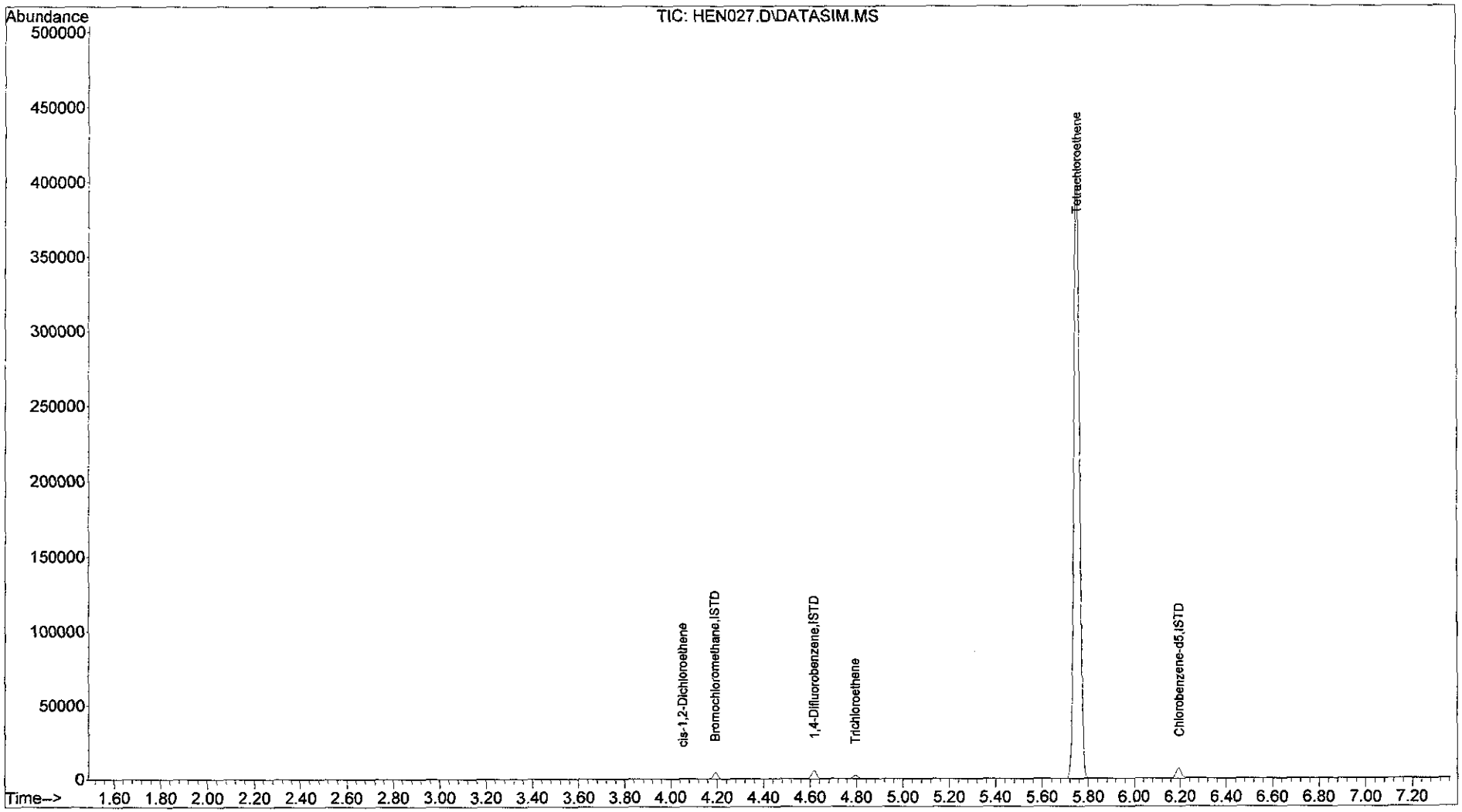
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.192	49	2348	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5358	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.197	117	5613	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
7) cis-1,2-Dichloroethene	4.054	61	167m	11.08 ppbv	
11) Trichloroethene	4.796	130	1001m	69.39 ppbv	
14) Tetrachloroethene	5.757	166	244627	13256.44 ppbv	100

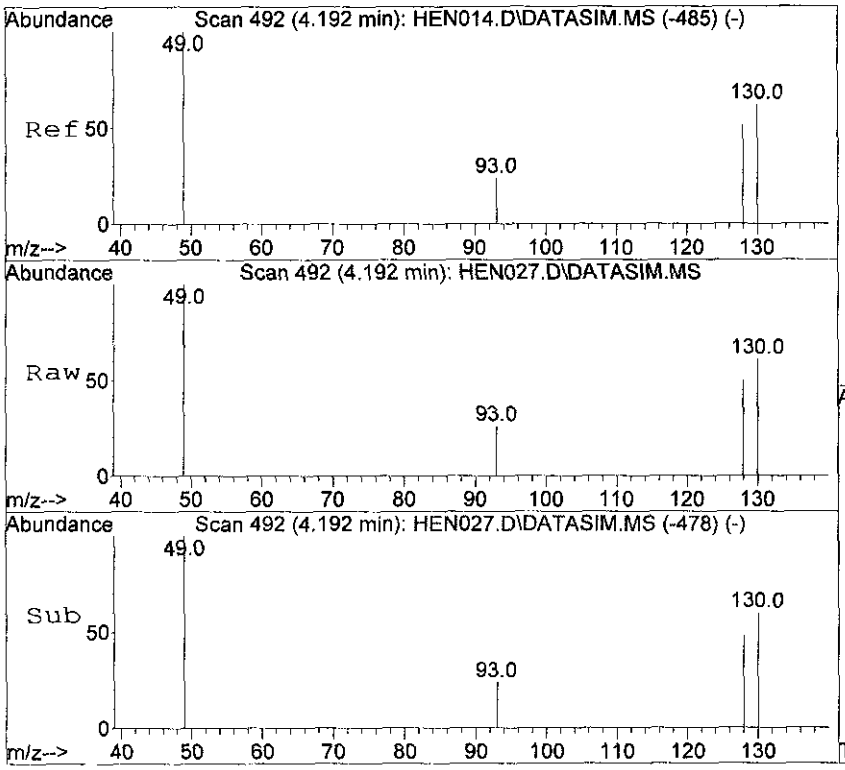
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN027.D
Acq On : 21 Mar 2012 17:00
Operator : SJT
Sample : 51107 \ BLDG H-SS-01 10X
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 10

Quant Time: Mar 21 17:08:40 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

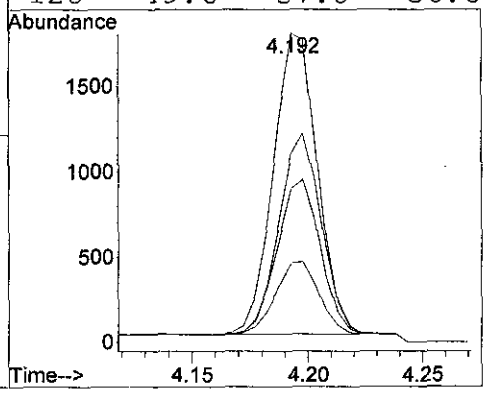


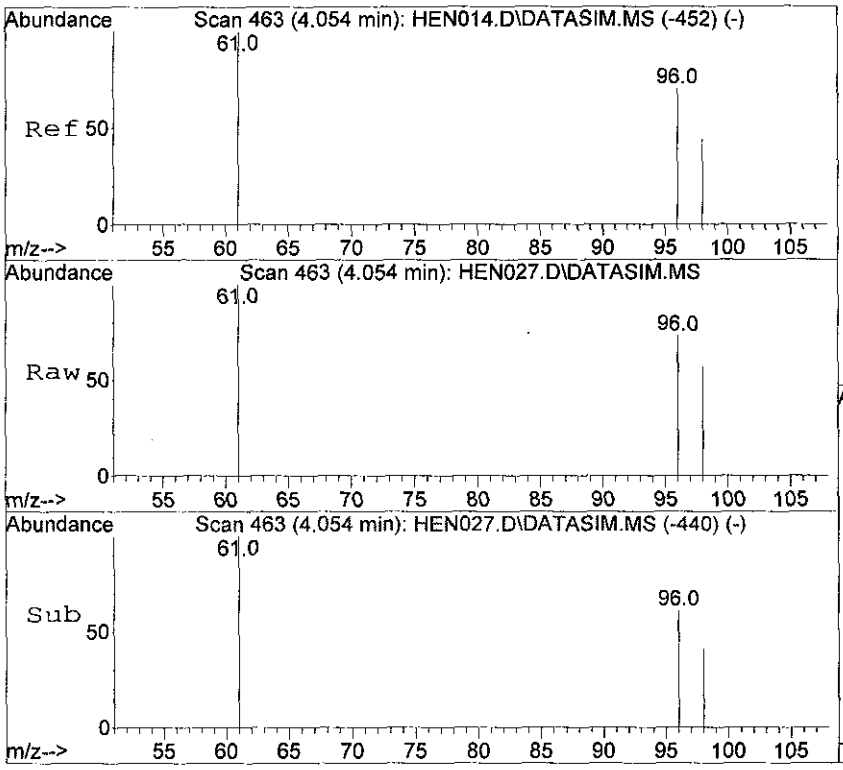


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN027.D
Acq: 21 Mar 2012 17:00

Tgt Ion: 49 Resp: 2348

Ion	Ratio	Lower	Upper
49	100		
130	60.7	46.5	69.7
93	25.6	19.0	28.6
128	49.6	37.8	56.6

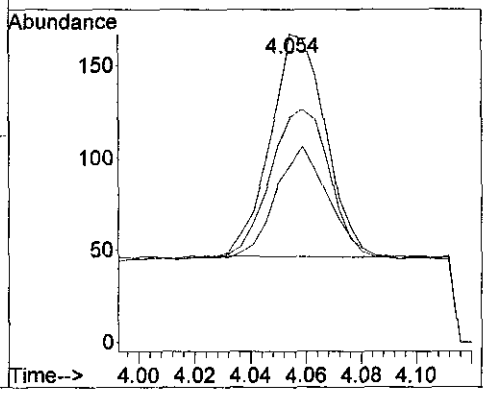


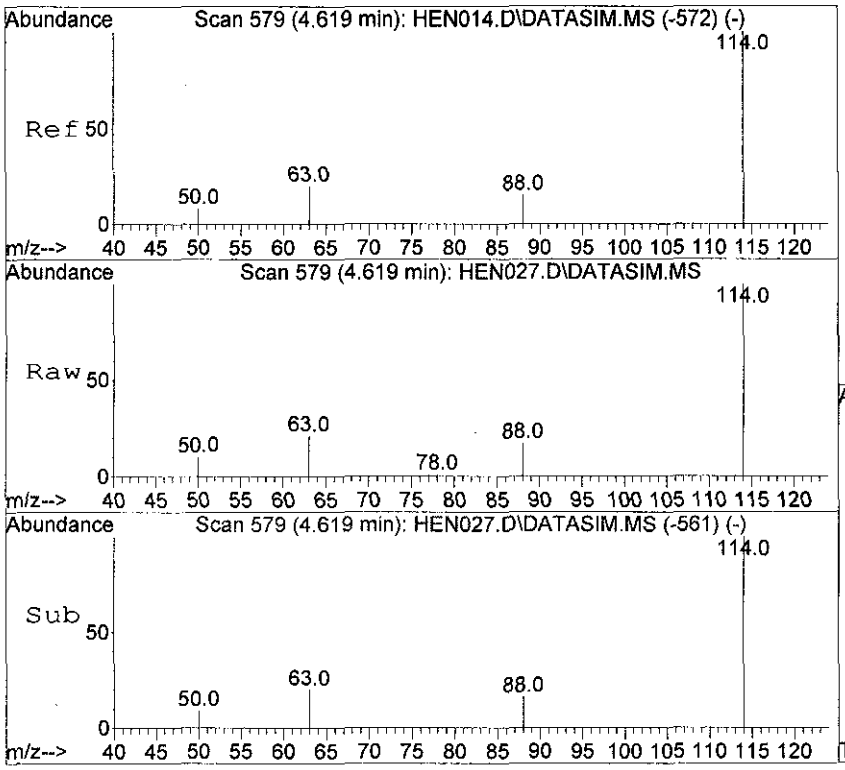


#7
cis-1,2-Dichloroethene
Concen: 11.08 ppbv m
RT: 4.054 min Scan# 463
Delta R.T. 0.000 min
Lab File: HEN027.D
Acq: 21 Mar 2012 17:00

Tgt Ion: 61 Resp: 167

Ion	Ratio	Lower	Upper
61	100		
96	211.4	56.2	84.4#
98	179.0	36.0	54.0#

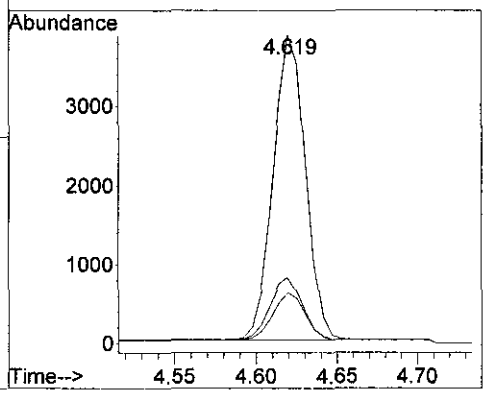


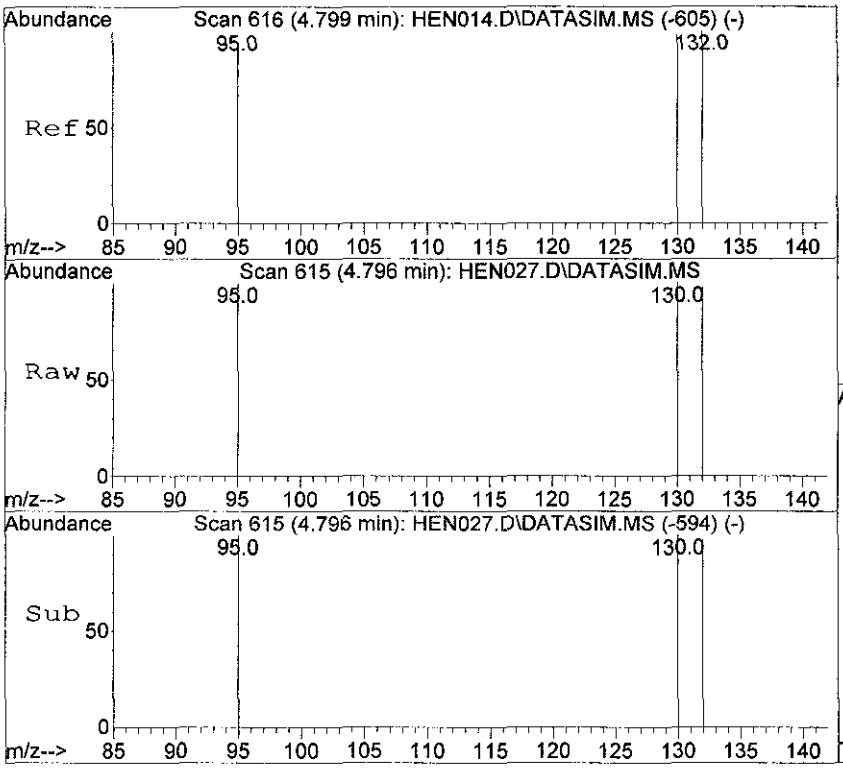


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN027.D
Acq: 21 Mar 2012 17:00

Tgt Ion:114 Resp: 5358

Ion	Ratio	Lower	Upper
114	100		
63	20.3	16.7	25.1
88	15.5	12.2	18.2

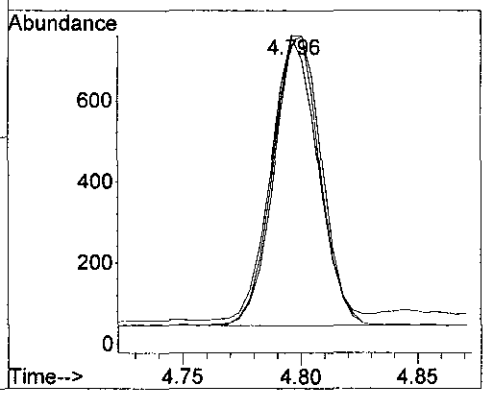


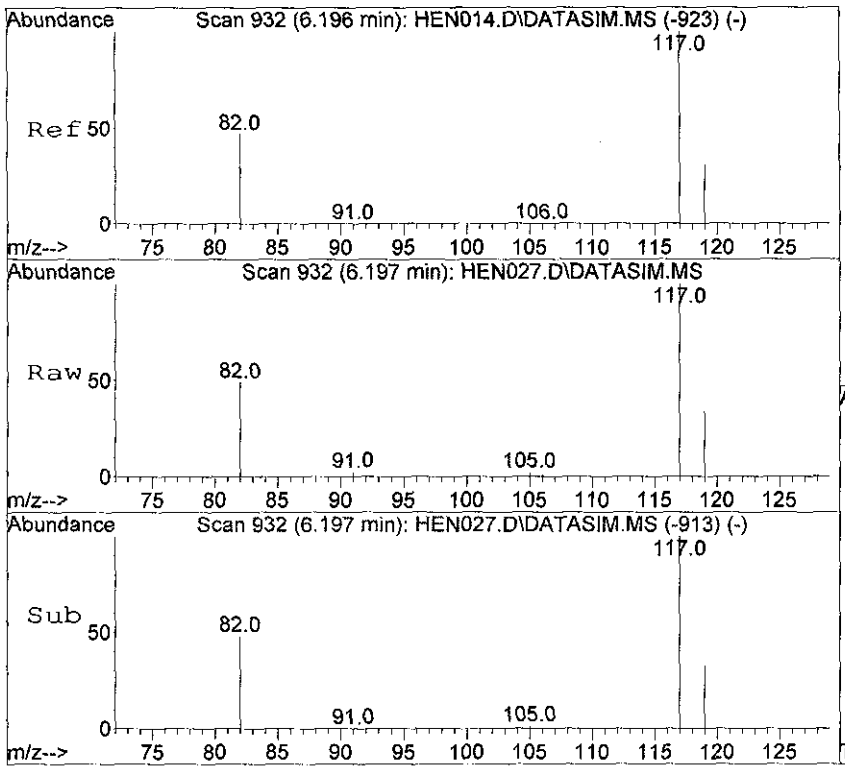


#11
Trichloroethene
Concen: 69.39 ppbv m
RT: 4.796 min Scan# 615
Delta R.T. -0.003 min
Lab File: HEN027.D
Acq: 21 Mar 2012 17:00

Tgt Ion:130 Resp: 1001

Ion	Ratio	Lower	Upper
130	100		
132	100.1	80.4	120.6
95	96.6	78.6	118.0

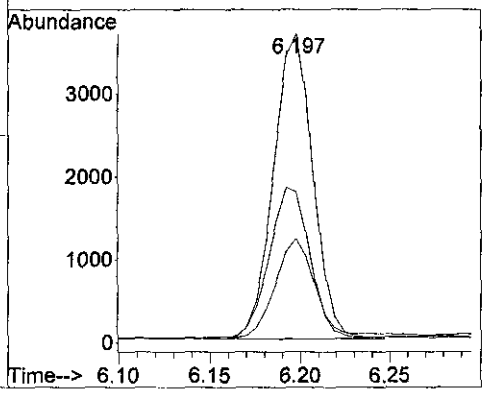


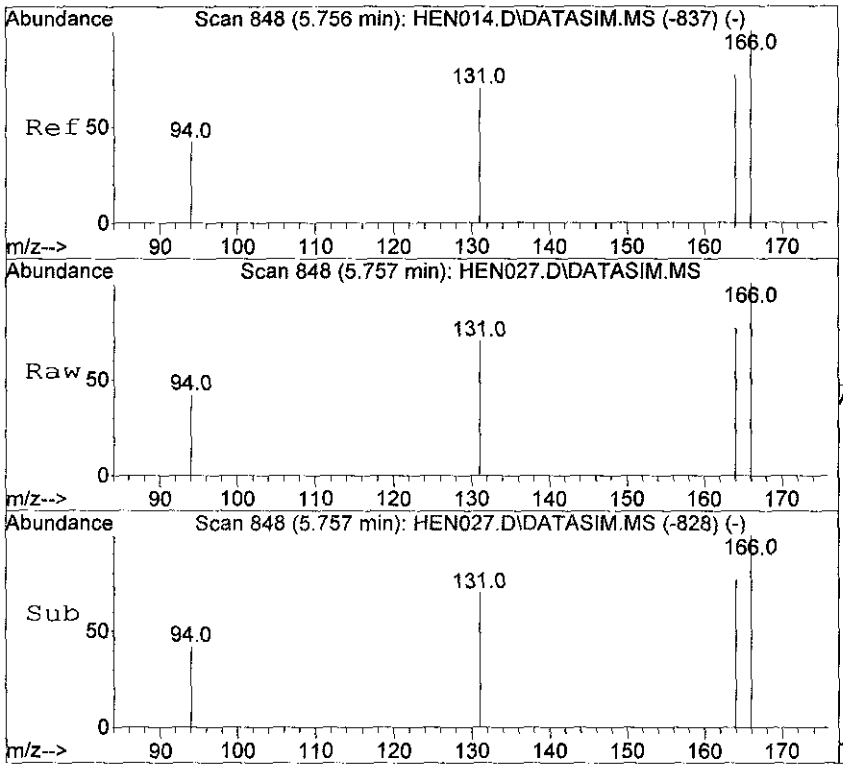


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN027.D
Acq: 21 Mar 2012 17:00

Tgt Ion:117 Resp: 5613

Ion	Ratio	Lower	Upper
117	100		
82	50.5	41.4	62.0
119	35.6	25.8	38.6

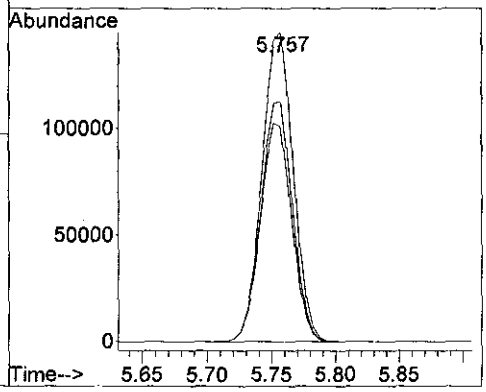




#14
Tetrachloroethene
Concen: 13256.44 ppbv
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN027.D
Acq: 21 Mar 2012 17:00

Tgt Ion:166 Resp: 244627

Ion	Ratio	Lower	Upper
166	100		
164	78.2	62.5	93.7
131	71.1	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN030.D
Acq On : 21 Mar 2012 17:38
Operator : SJT
Sample : 51108 \ BLDG H-SS-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 17:45:50 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

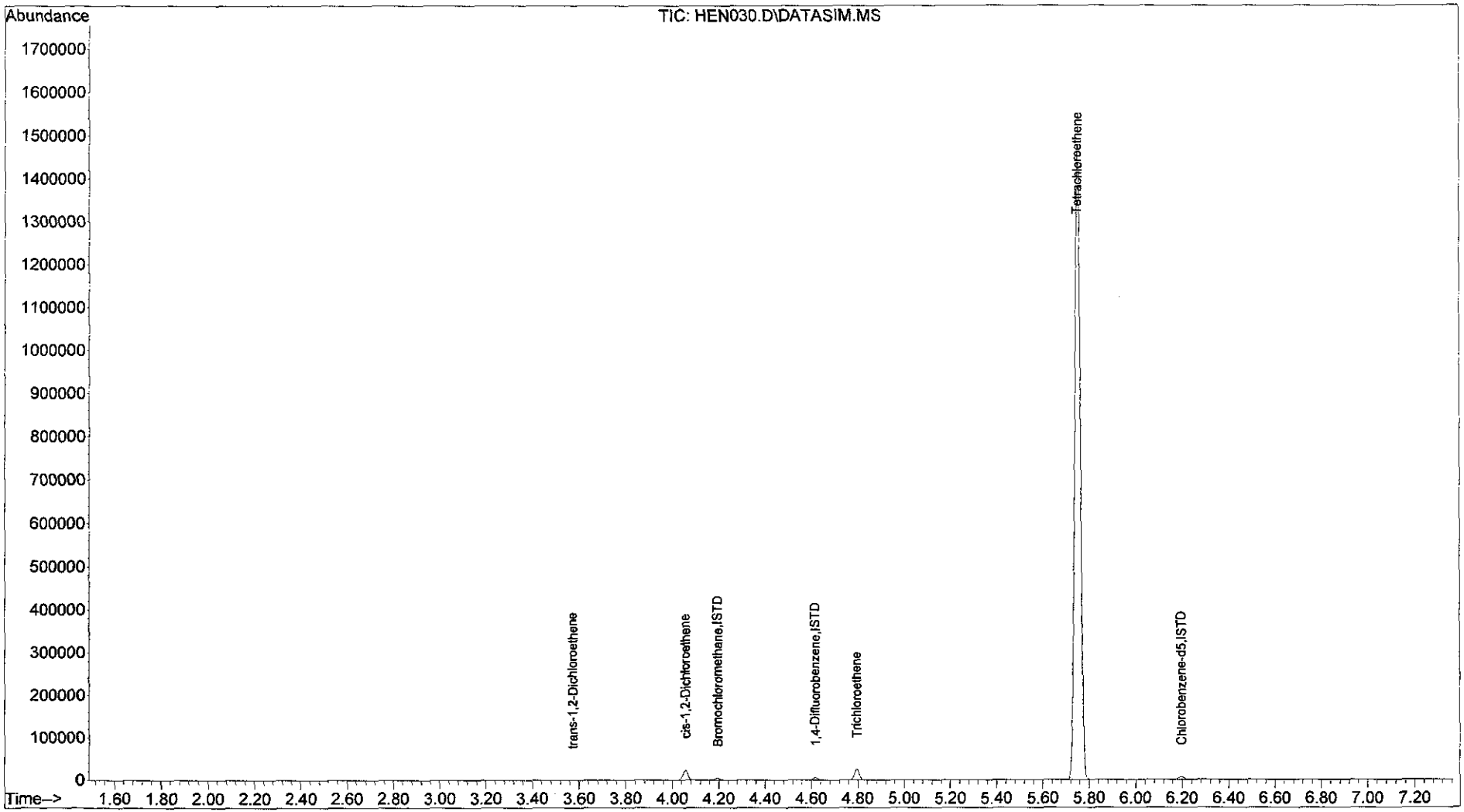
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.198	49	2299	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.620	114	5335	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.198	117	5468	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
5) trans-1,2-Dichloroethene	3.575	61	139m	0.90	ppbv	
7) cis-1,2-Dichloroethene	4.059	61	15122m	102.49	ppbv	
11) Trichloroethene	4.796	130	11597	80.74	ppbv	99
14) Tetrachloroethene	5.752	166	854244	4751.94	ppbv	100

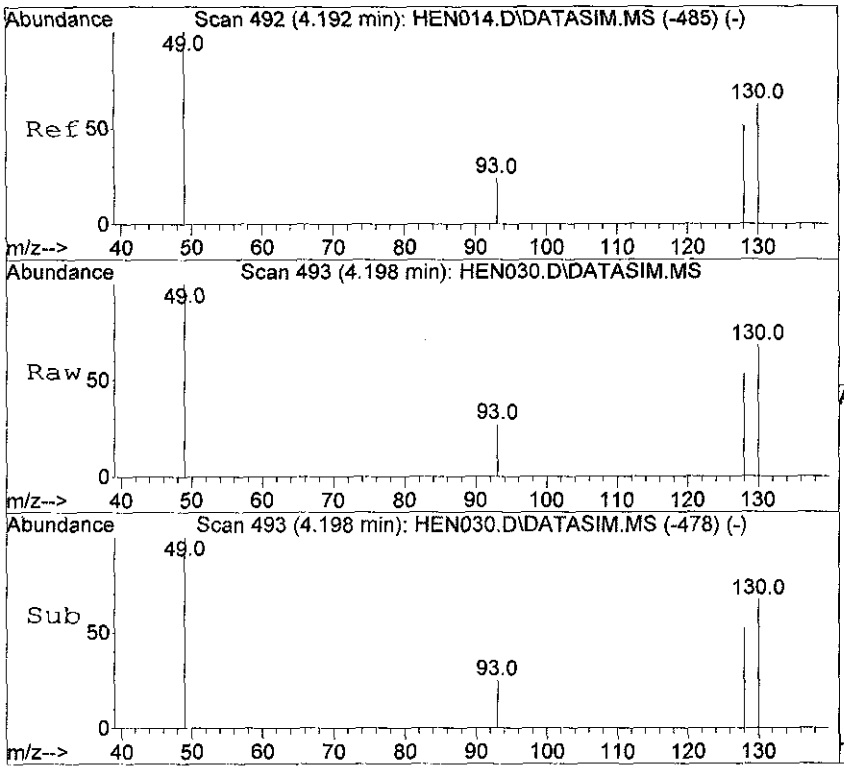
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN030.D
Acq On : 21 Mar 2012 17:38
Operator : SJT
Sample : 51108 \ BLDG H-SS-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 17:45:50 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

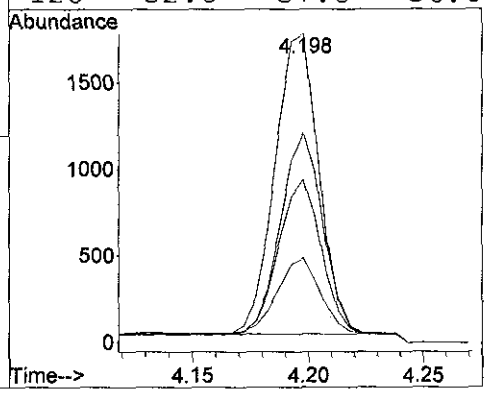


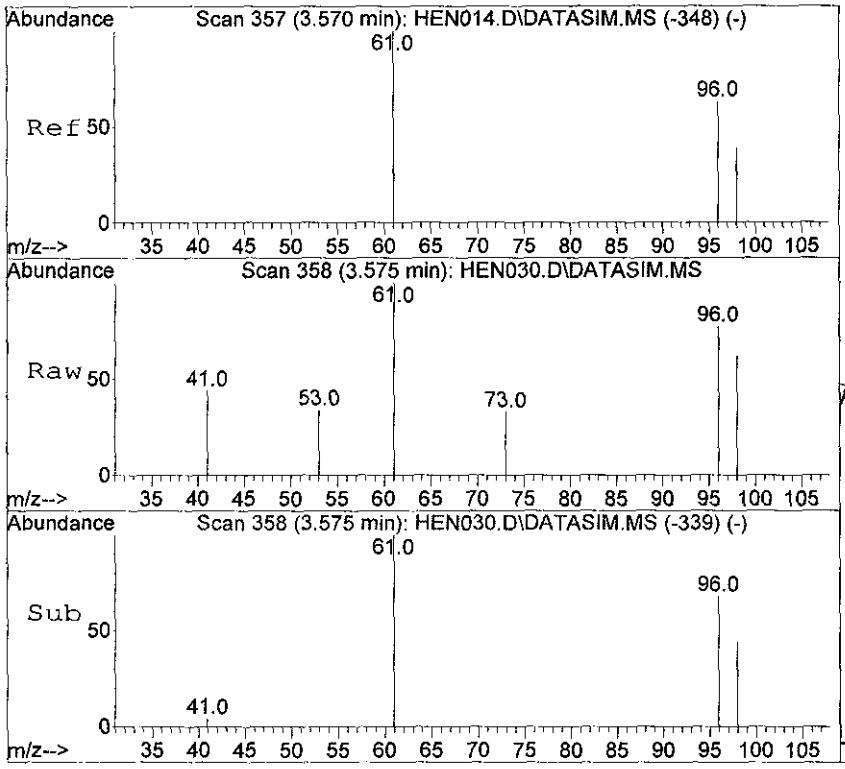


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.198 min Scan# 493
Delta R.T. 0.005 min
Lab File: HEN030.D
Acq: 21 Mar 2012 17:38

Tgt Ion: 49 Resp: 2299

Ion	Ratio	Lower	Upper
49	100		
130	67.8	46.5	69.7
93	27.3	19.0	28.6
128	52.8	37.8	56.6

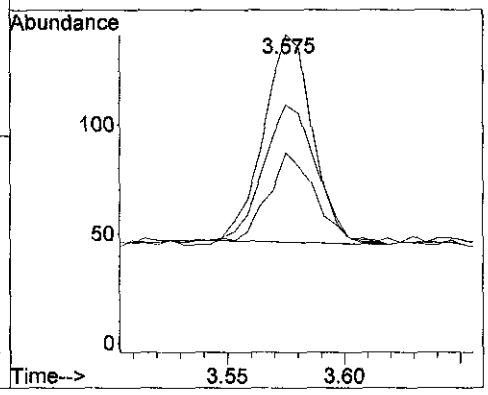


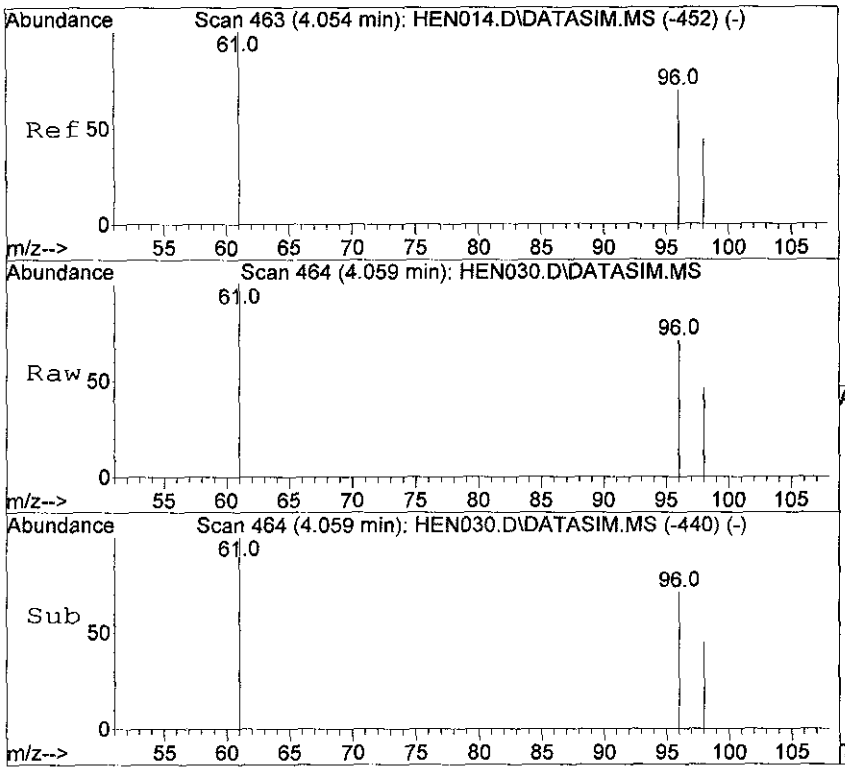


#5
trans-1,2-Dichloroethene
Concen: 0.90 ppbv m
RT: 3.575 min Scan# 358
Delta R.T. 0.006 min
Lab File: HEN030.D
Acq: 21 Mar 2012 17:38

Tgt Ion: 61 Resp: 139

Ion	Ratio	Lower	Upper
61	100		
96	68.3	51.3	76.9
98	43.9	32.7	49.1

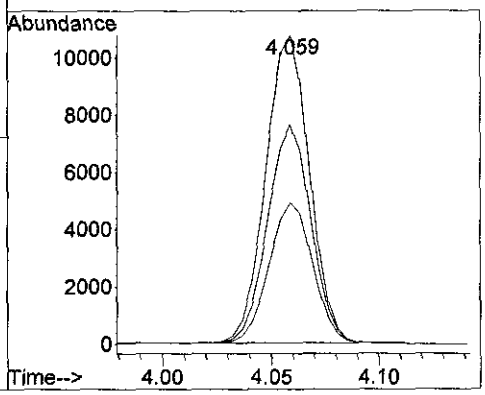


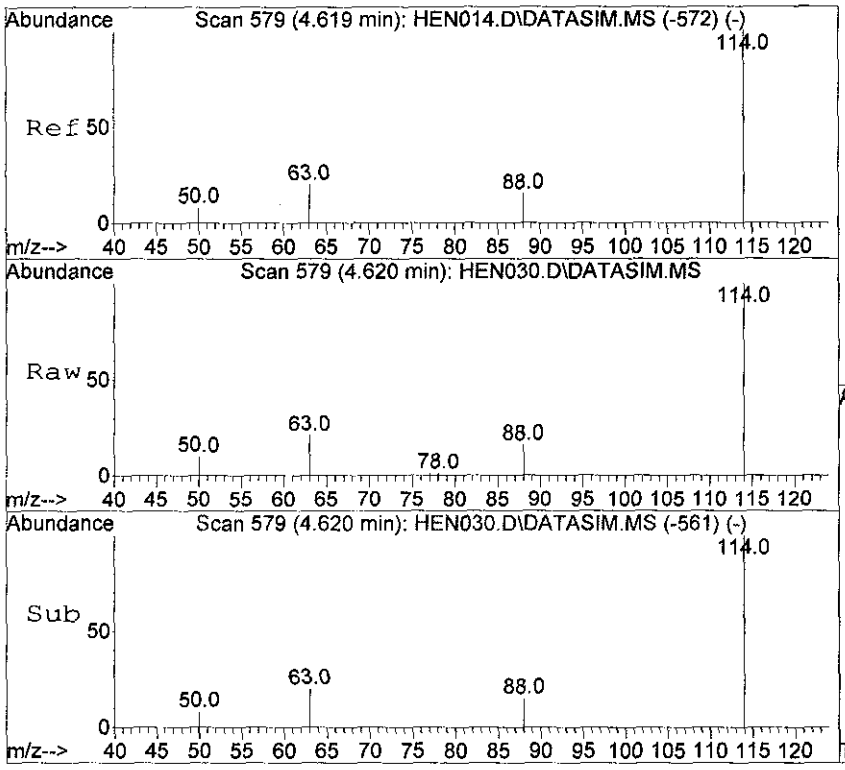


#7
cis-1,2-Dichloroethene
Concen: 102.49 ppbv m
RT: 4.059 min Scan# 464
Delta R.T. 0.005 min
Lab File: HEN030.D
Acq: 21 Mar 2012 17:38

Tgt Ion: 61 Resp: 15122

Ion	Ratio	Lower	Upper
61	100		
96	72.6	56.2	84.4
98	47.4	36.0	54.0

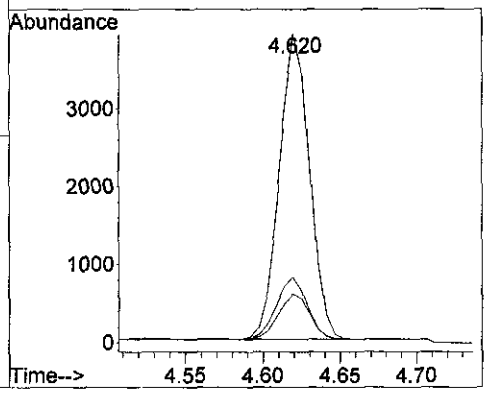


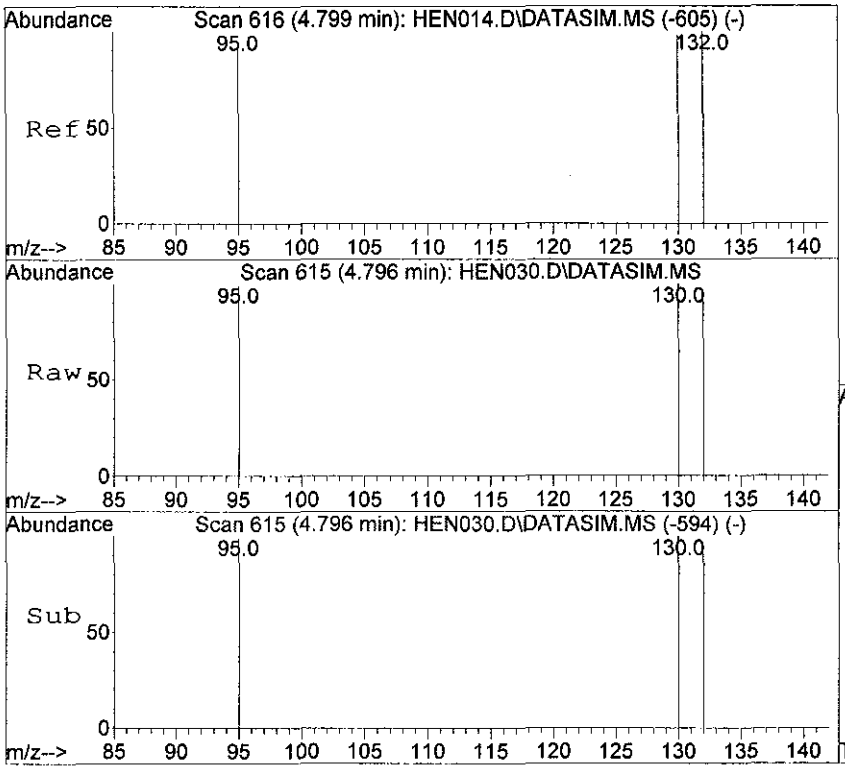


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.620 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN030.D
Acq: 21 Mar 2012 17:38

Tgt Ion:114 Resp: 5335

Ion	Ratio	Lower	Upper
114	100		
63	20.4	16.7	25.1
88	15.1	12.2	18.2

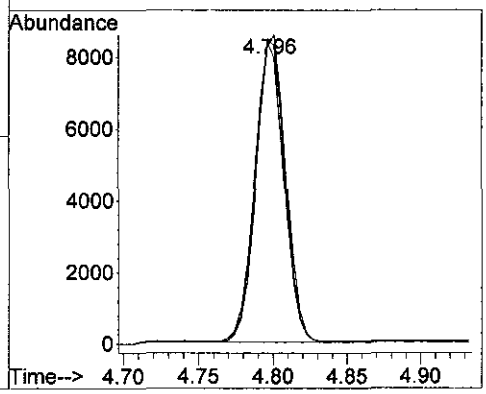


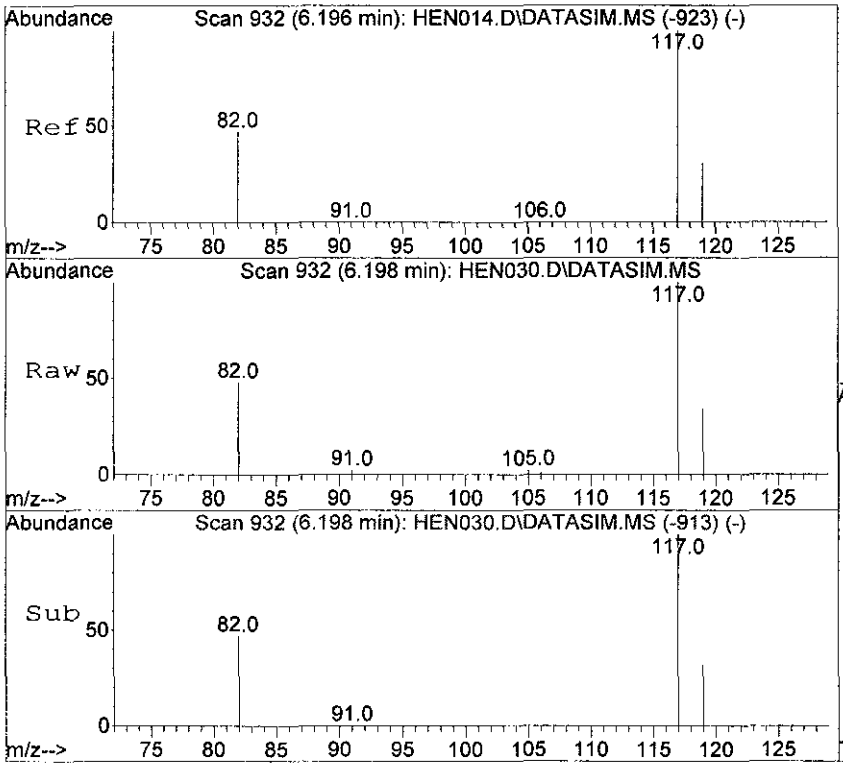


#11
Trichloroethene
Concen: 80.74 ppbv
RT: 4.796 min Scan# 615
Delta R.T. -0.003 min
Lab File: HEN030.D
Acq: 21 Mar 2012 17:38

Tgt Ion:130 Resp: 11597

Ion	Ratio	Lower	Upper
130	100		
132	100.9	80.4	120.6
95	97.6	78.6	118.0

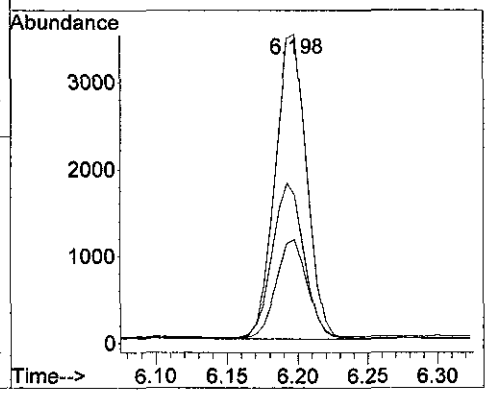


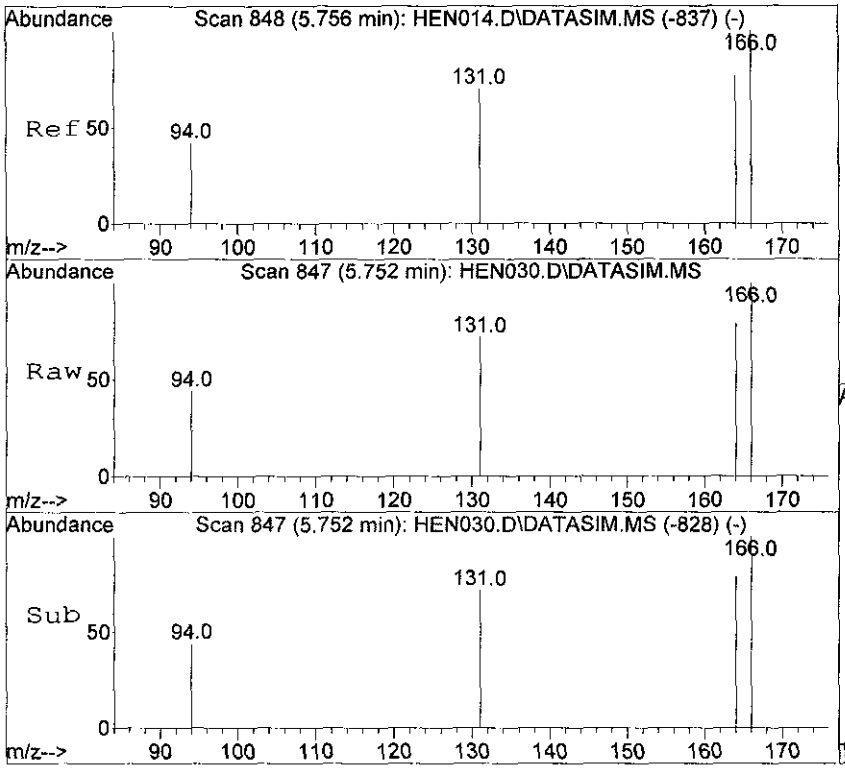


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.198 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN030.D
Acq: 21 Mar 2012 17:38

Tgt Ion:117 Resp: 5468

Ion	Ratio	Lower	Upper
117	100		
82	51.1	41.4	62.0
119	32.3	25.8	38.6

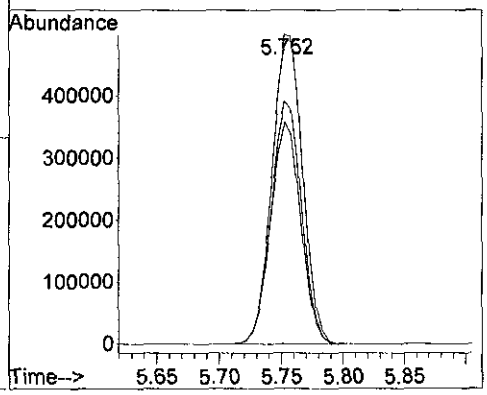




#14
Tetrachloroethene
Concen: 4751.94 ppbv
RT: 5.752 min Scan# 847
Delta R.T. -0.004 min
Lab File: HEN030.D
Acq: 21 Mar 2012 17:38

Tgt Ion:166 Resp: 854244

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.5	93.7
131	70.8	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN031.D
Acq On : 21 Mar 2012 17:49
Operator : SJT
Sample : 51109 \ BLDG H-SS-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 17:58:10 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

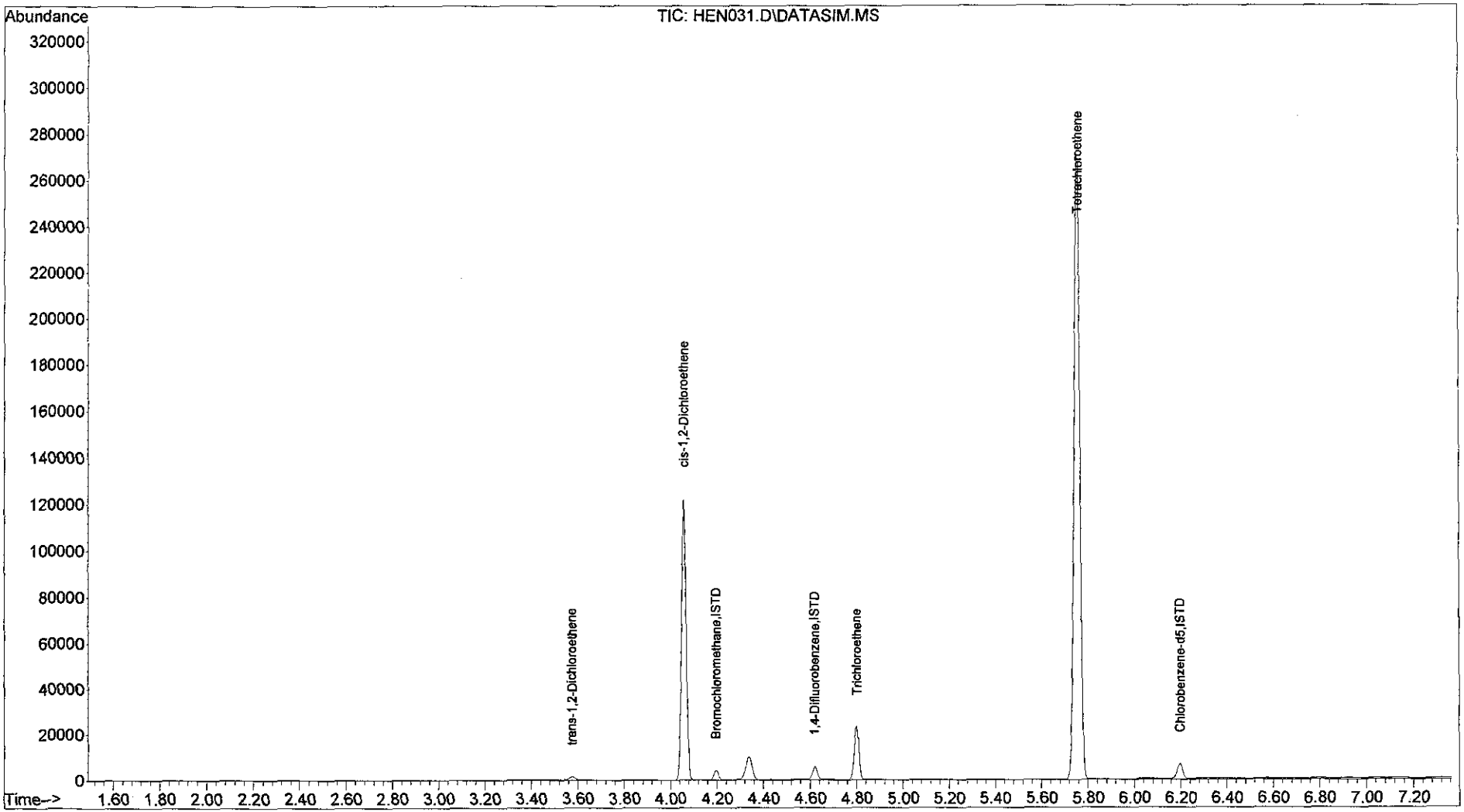
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.198	49	2284	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5285	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.197	117	5525	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
5) trans-1,2-Dichloroethene	3.575	61	948m	6.18 ppbv	
7) cis-1,2-Dichloroethene	4.059	61	79359	541.37 ppbv	100
11) Trichloroethene	4.800	130	10825	76.08 ppbv	100
14) Tetrachloroethene	5.757	166	158325	871.64 ppbv	100

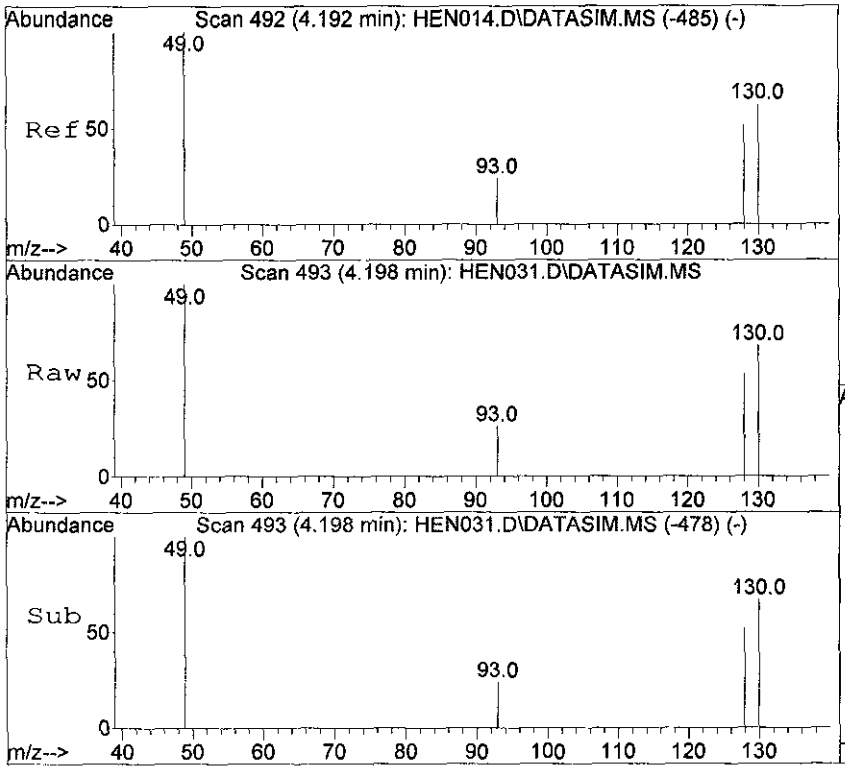
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN031.D
Acq On : 21 Mar 2012 17:49
Operator : SJT
Sample : 51109 \ BLDG H-SS-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 17:58:10 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

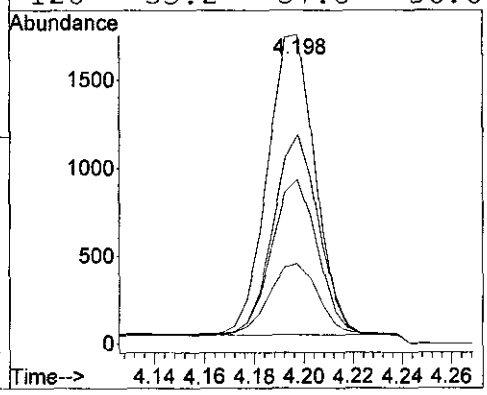


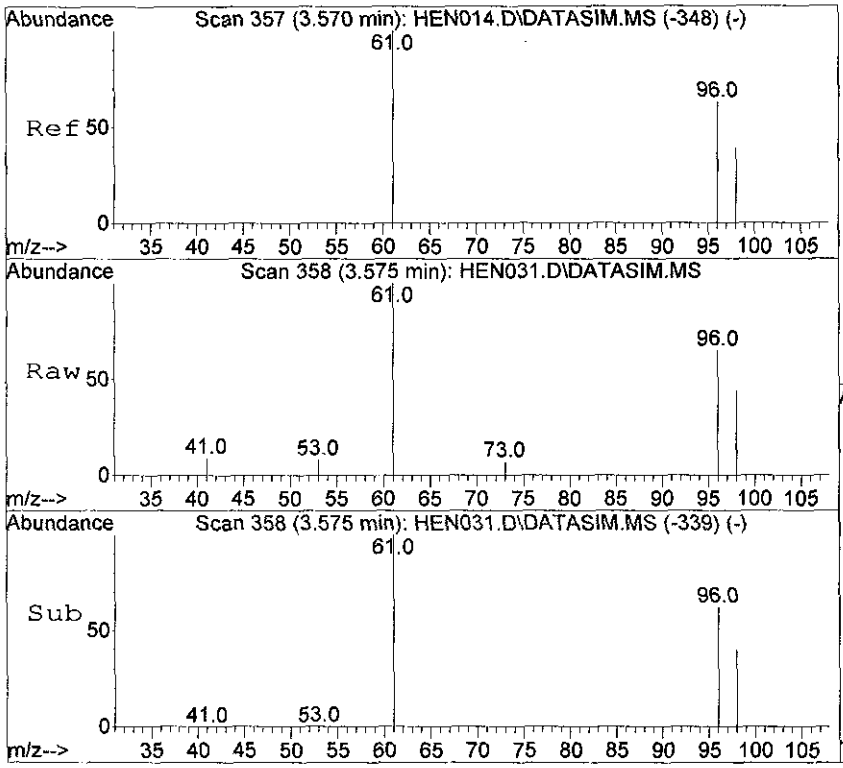


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.198 min Scan# 493
Delta R.T. 0.005 min
Lab File: HEN031.D
Acq: 21 Mar 2012 17:49

Tgt Ion: 49 Resp: 2284

Ion	Ratio	Lower	Upper
49	100		
130	67.9	46.5	69.7
93	25.8	19.0	28.6
128	53.2	37.8	56.6

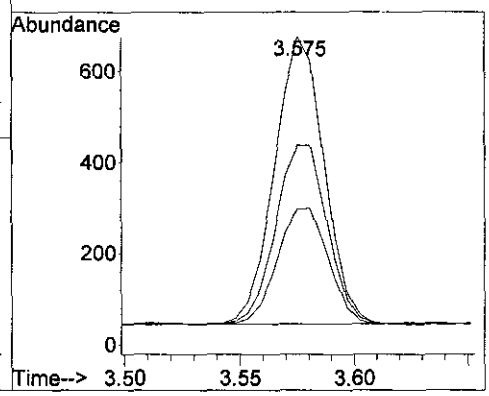


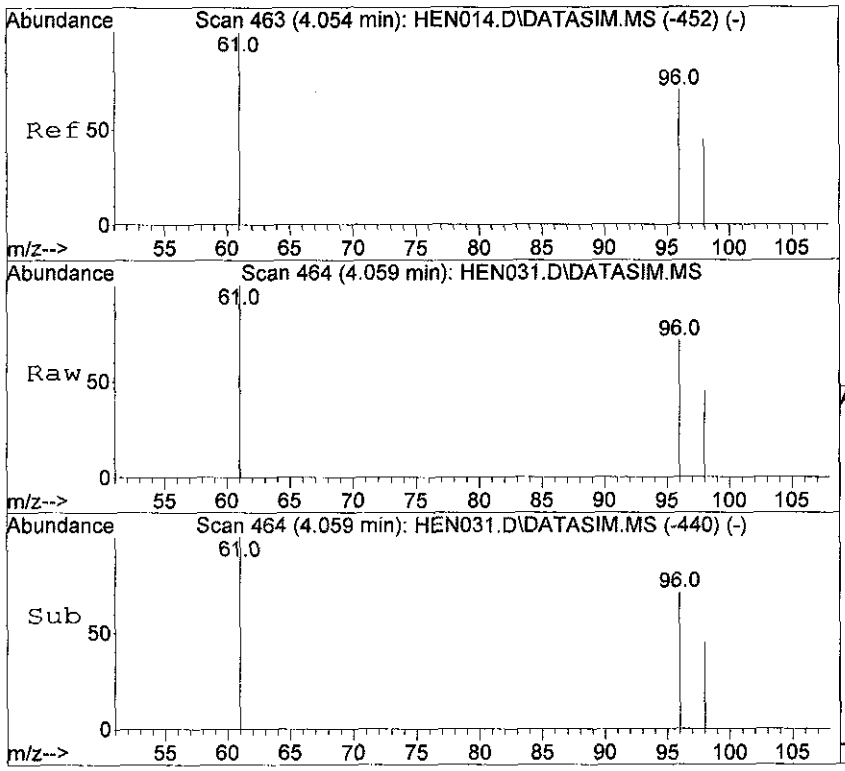


#5
trans-1,2-Dichloroethene
Concen: 6.18 ppbv m
RT: 3.575 min Scan# 358
Delta R.T. 0.006 min
Lab File: HEN031.D
Acq: 21 Mar 2012 17:49

Tgt Ion: 61 Resp: 948

Ion	Ratio	Lower	Upper
61	100		
96	64.6	51.3	76.9
98	41.4	32.7	49.1

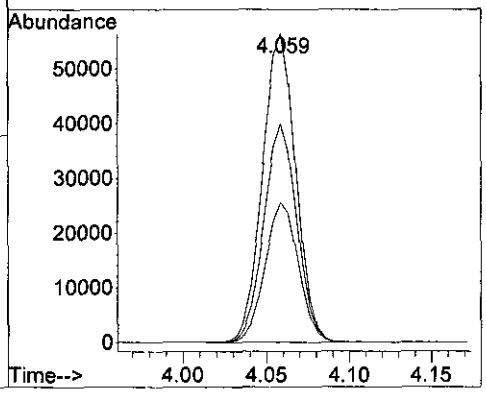


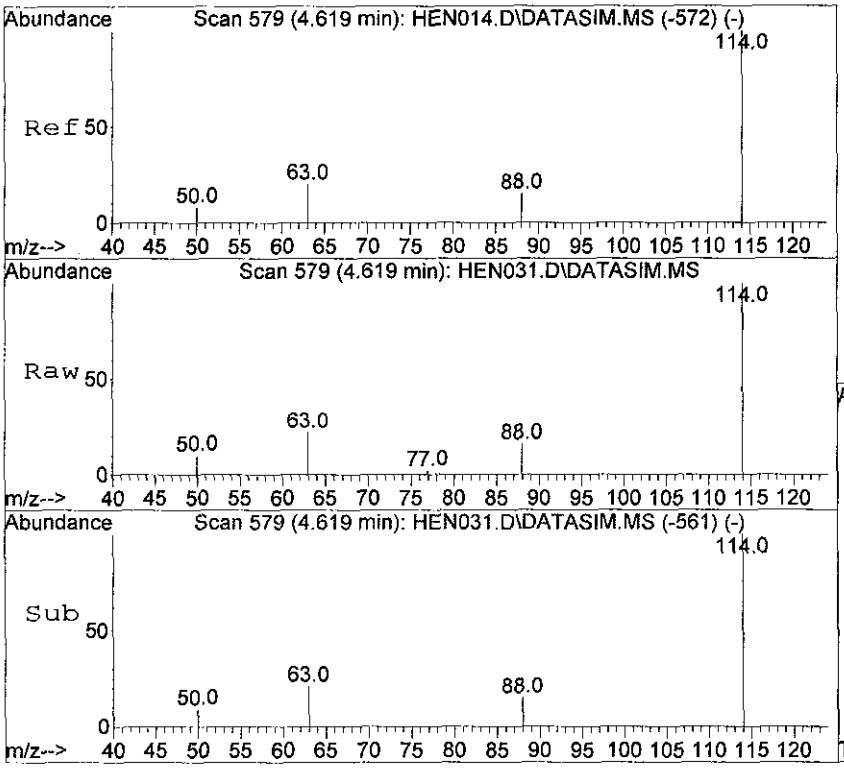


#7
cis-1,2-Dichloroethene
Concen: 541.37 ppbv
RT: 4.059 min Scan# 464
Delta R.T. 0.004 min
Lab File: HEN031.D
Acq: 21 Mar 2012 17:49

Tgt Ion: 61 Resp: 79359

Ion	Ratio	Lower	Upper
61	100		
96	70.4	56.2	84.4
98	45.5	36.0	54.0

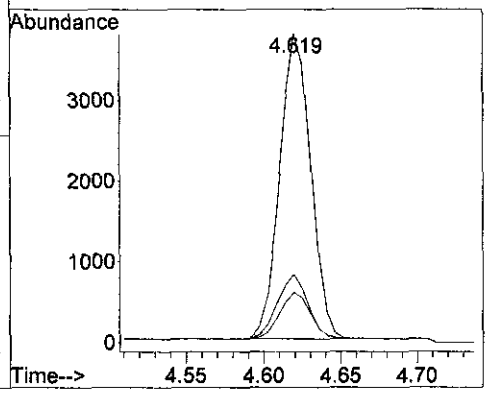


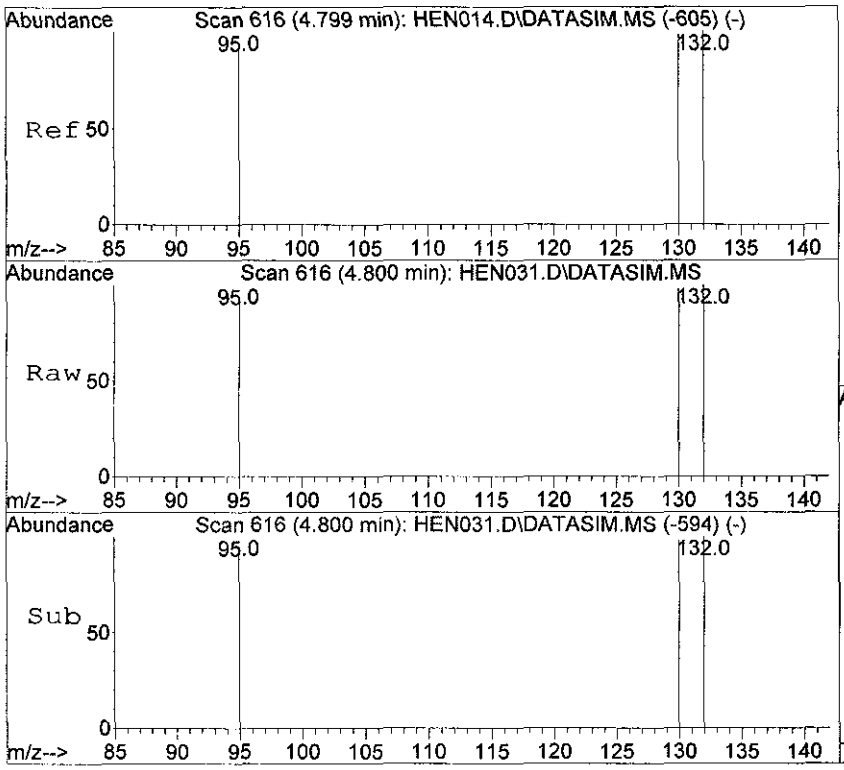


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN031.D
Acq: 21 Mar 2012 17:49

Tgt Ion:114 Resp: 5285

Ion	Ratio	Lower	Upper
114	100		
63	20.5	16.7	25.1
88	15.1	12.2	18.2

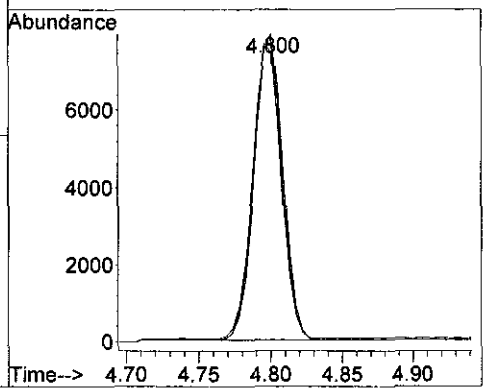


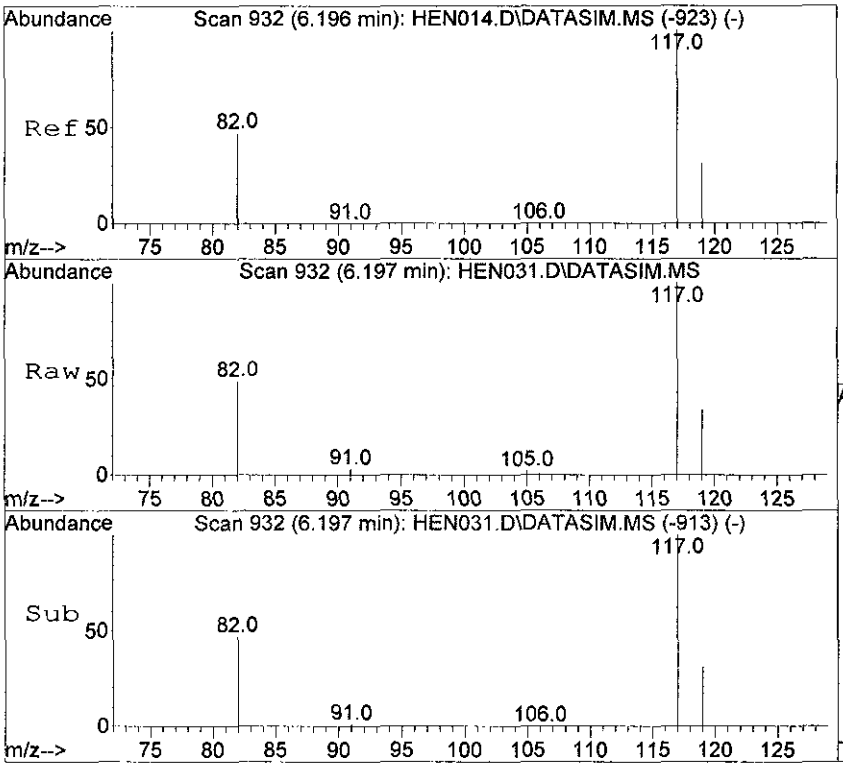


#11
Trichloroethene
Concen: 76.08 ppbv
RT: 4.800 min Scan# 616
Delta R.T. 0.001 min
Lab File: HEN031.D
Acq: 21 Mar 2012 17:49

Tgt Ion:130 Resp: 10825

Ion	Ratio	Lower	Upper
130	100		
132	101.1	80.4	120.6
95	98.1	78.6	118.0

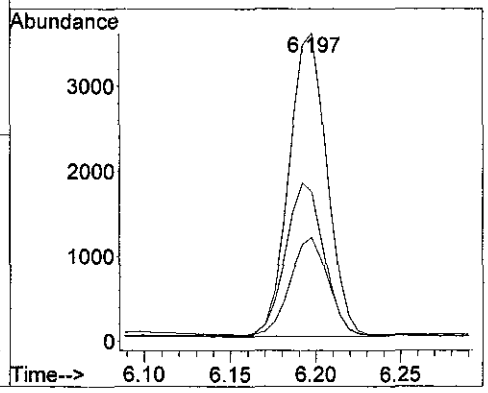


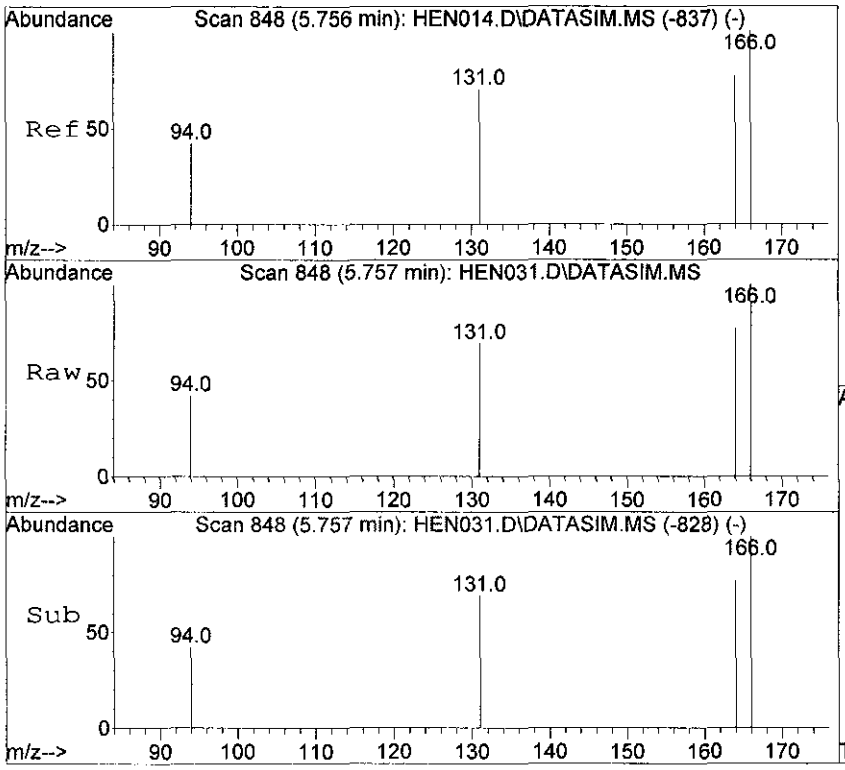


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN031.D
Acq: 21 Mar 2012 17:49

Tgt Ion:117 Resp: 5525

Ion	Ratio	Lower	Upper
117	100		
82	50.6	41.4	62.0
119	33.1	25.8	38.6

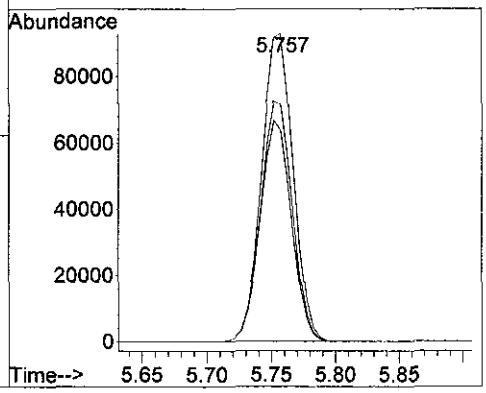




#14
Tetrachloroethene
Concen: 871.64 ppbv
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN031.D
Acq: 21 Mar 2012 17:49

Tgt Ion:166 Resp: 158325

Ion	Ratio	Lower	Upper
166	100		
164	78.4	62.5	93.7
131	71.1	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN032.D
Acq On : 21 Mar 2012 18:01
Operator : SJT
Sample : 51110 \ BLDG G-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 22:00:02 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

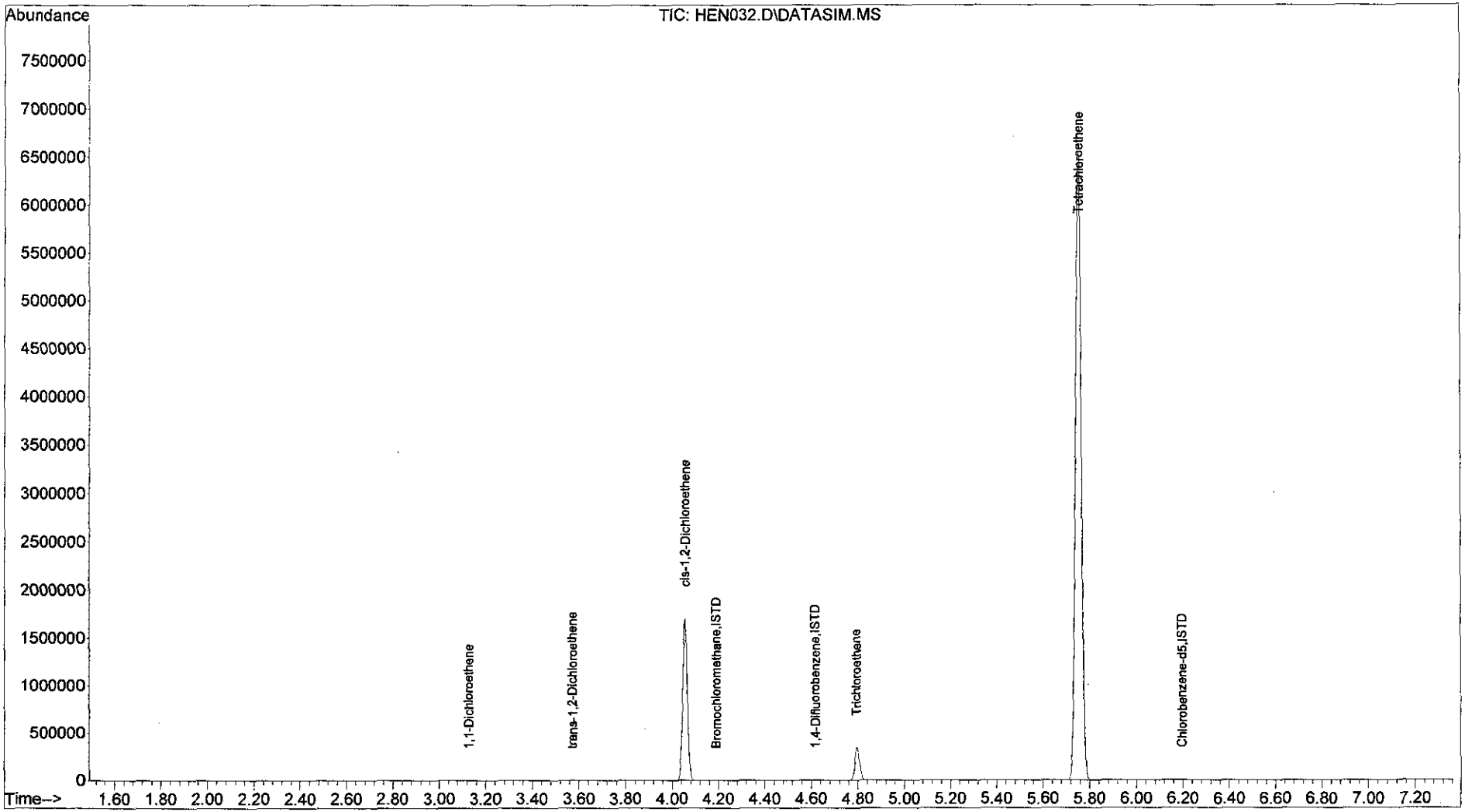
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.191	49	2273	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5354	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.197	117	5432	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
3) 1,1-Dichloroethene	3.127	61	1440	8.42 ppbv	99
5) trans-1,2-Dichloroethene	3.574	61	1983	12.99 ppbv	100
7) cis-1,2-Dichloroethene	4.058	61	1118180	7664.86 ppbv	99
11) Trichloroethene	4.796	130	162766	1129.15 ppbv	99
14) Tetrachloroethene	5.757	166	3884538	21751.90 ppbv	99

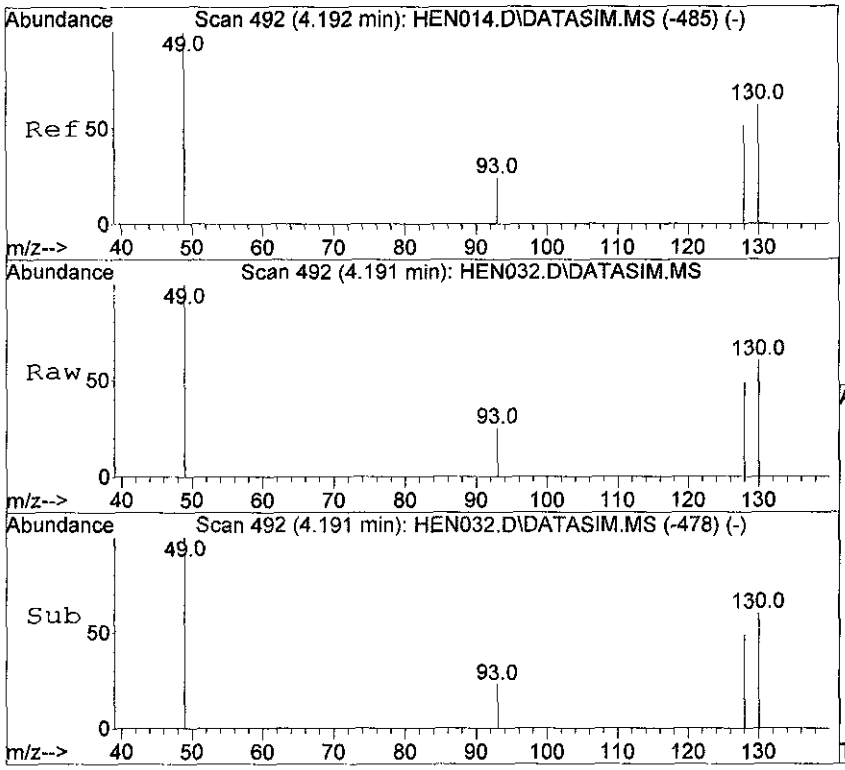
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN032.D
Acq On : 21 Mar 2012 18:01
Operator : SJT
Sample : 51110 \ BLDG G-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 22:00:02 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

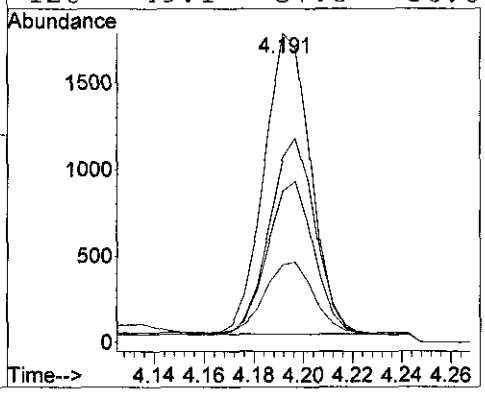


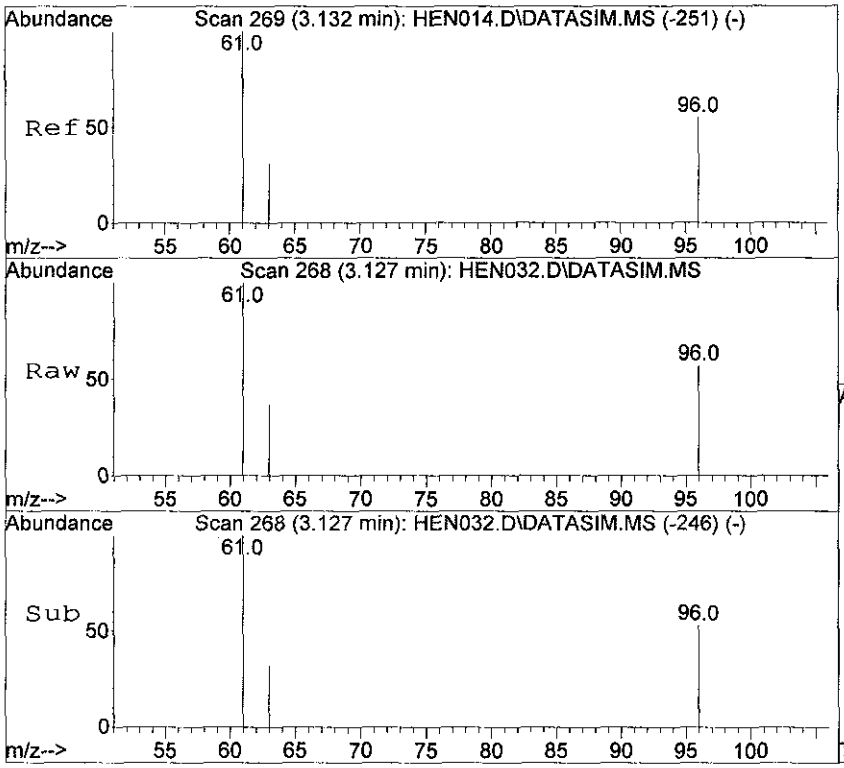


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.191 min Scan# 492
Delta R.T. -0.001 min
Lab File: HEN032.D
Acq: 21 Mar 2012 18:01

Tgt Ion: 49 Resp: 2273

Ion	Ratio	Lower	Upper
49	100		
130	59.7	46.5	69.7
93	25.1	19.0	28.6
128	49.1	37.8	56.6

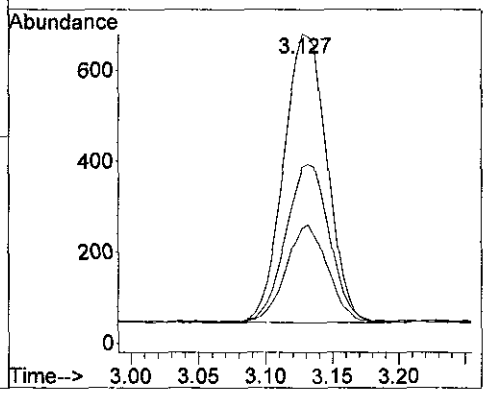


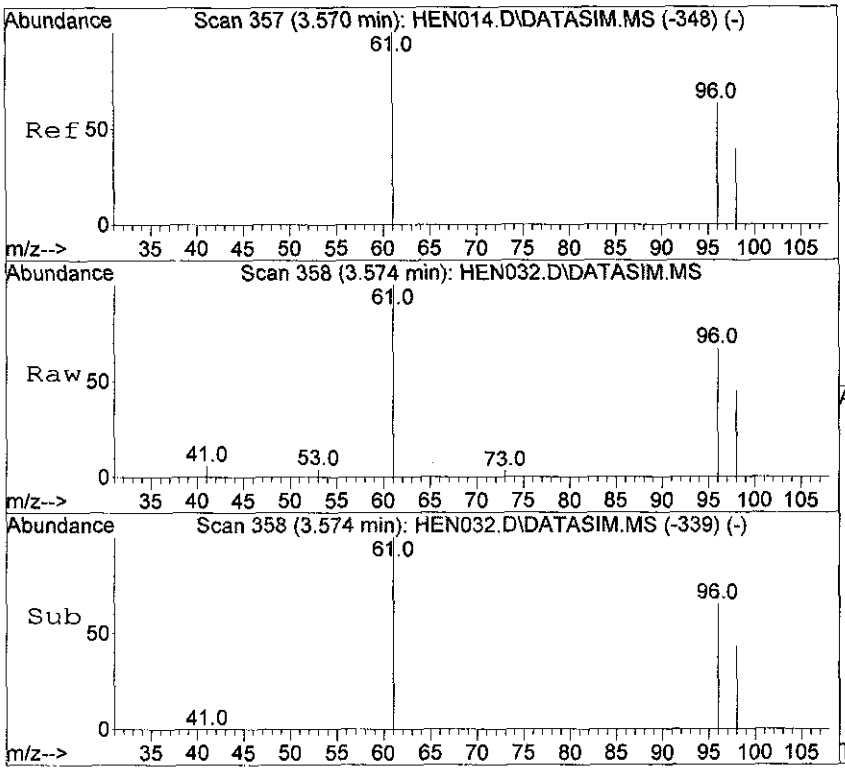


#3
1,1-Dichloroethene
Concen: 8.42 ppbv
RT: 3.127 min Scan# 268
Delta R.T. -0.004 min
Lab File: HEN032.D
Acq: 21 Mar 2012 18:01

Tgt Ion: 61 Resp: 1440

Ion	Ratio	Lower	Upper
61	100		
96	54.2	43.8	65.6
63	32.4	25.1	37.7

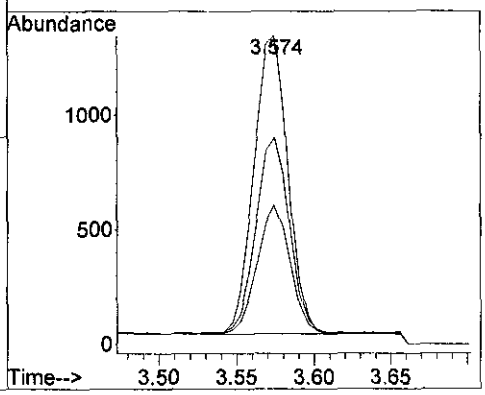


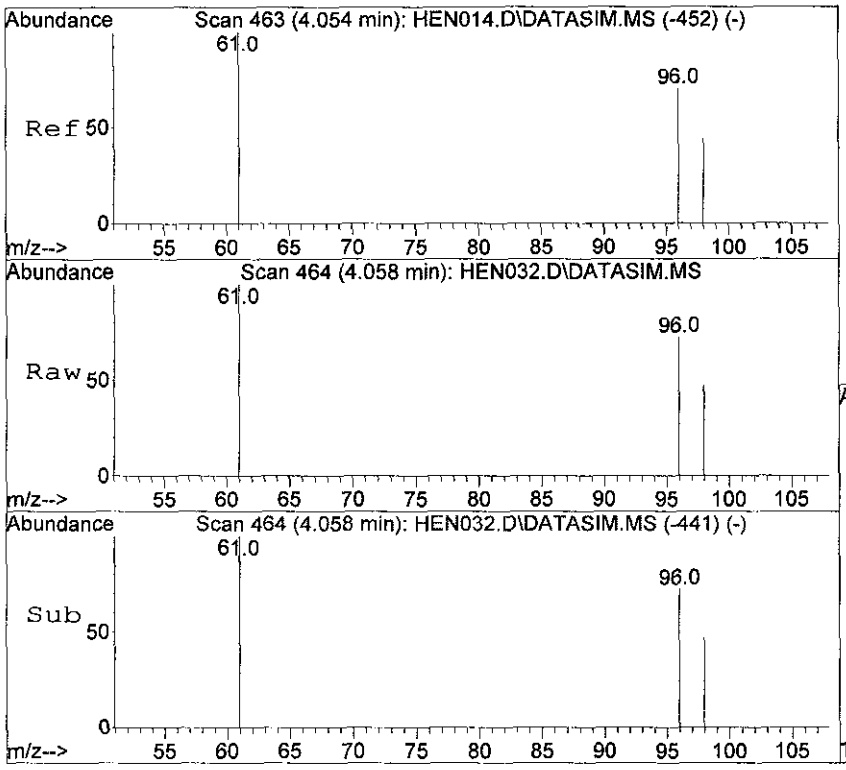


#5
trans-1,2-Dichloroethene
Concen: 12.99 ppbv
RT: 3.574 min Scan# 358
Delta R.T. 0.005 min
Lab File: HEN032.D
Acq: 21 Mar 2012 18:01

Tgt Ion: 61 Resp: 1983

Ion	Ratio	Lower	Upper
61	100		
96	64.1	51.3	76.9
98	41.5	32.7	49.1

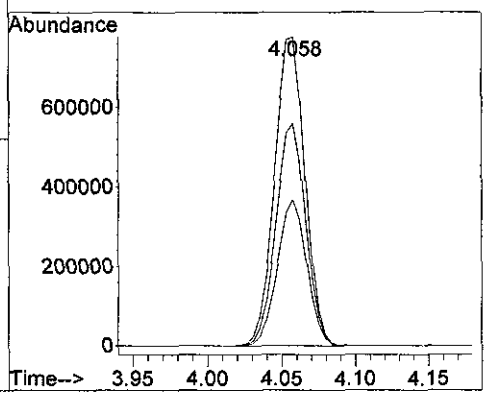


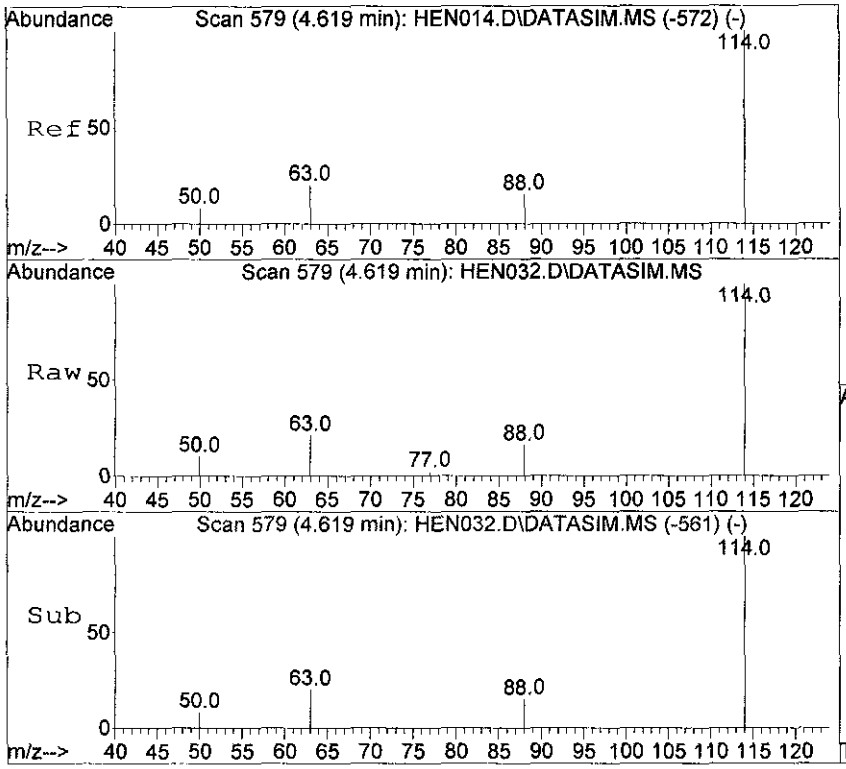


#7
cis-1,2-Dichloroethene
Concen: 7664.86 ppbv
RT: 4.058 min Scan# 464
Delta R.T. 0.004 min
Lab File: HEN032.D
Acq: 21 Mar 2012 18:01

Tgt Ion: 61 Resp: 1118180

Ion	Ratio	Lower	Upper
61	100		
96	70.8	56.2	84.4
98	45.9	36.0	54.0

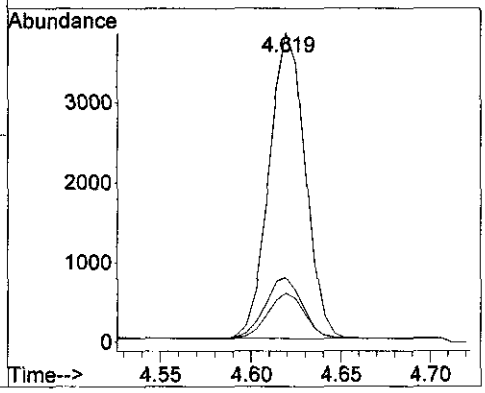


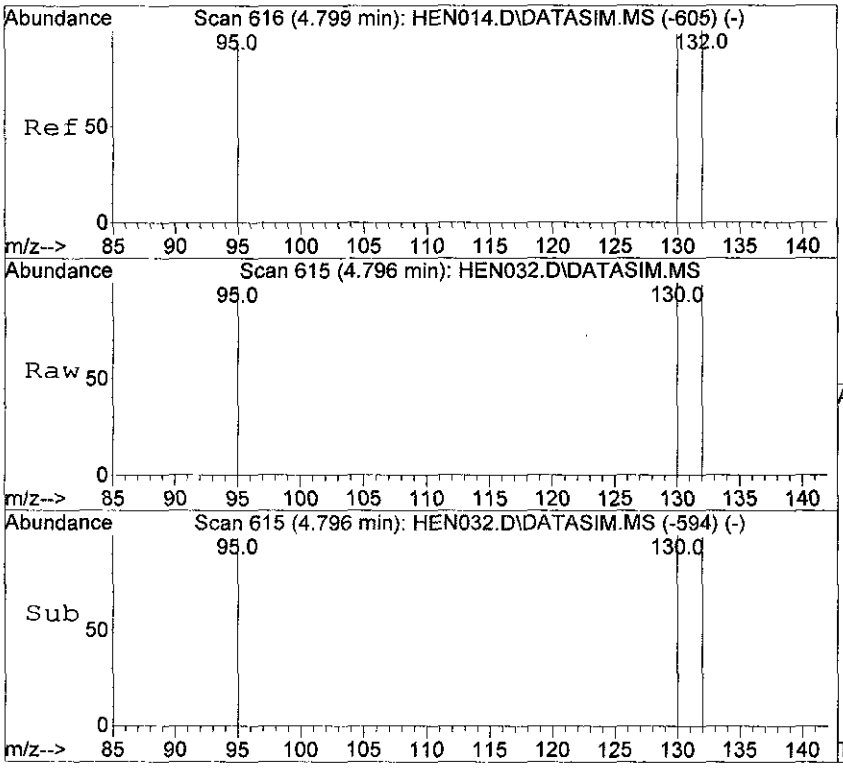


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. -0.000 min
Lab File: HEN032.D
Acq: 21 Mar 2012 18:01

Tgt Ion:114 Resp: 5354

Ion	Ratio	Lower	Upper
114	100		
63	20.2	16.7	25.1
88	15.2	12.2	18.2

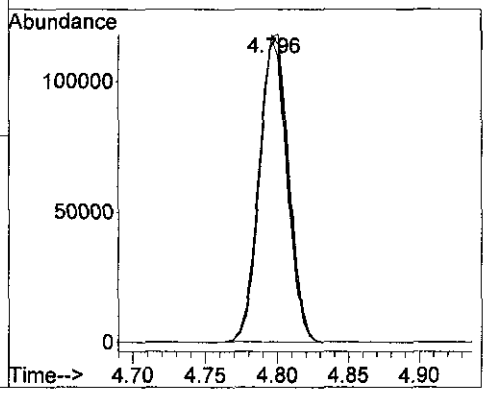


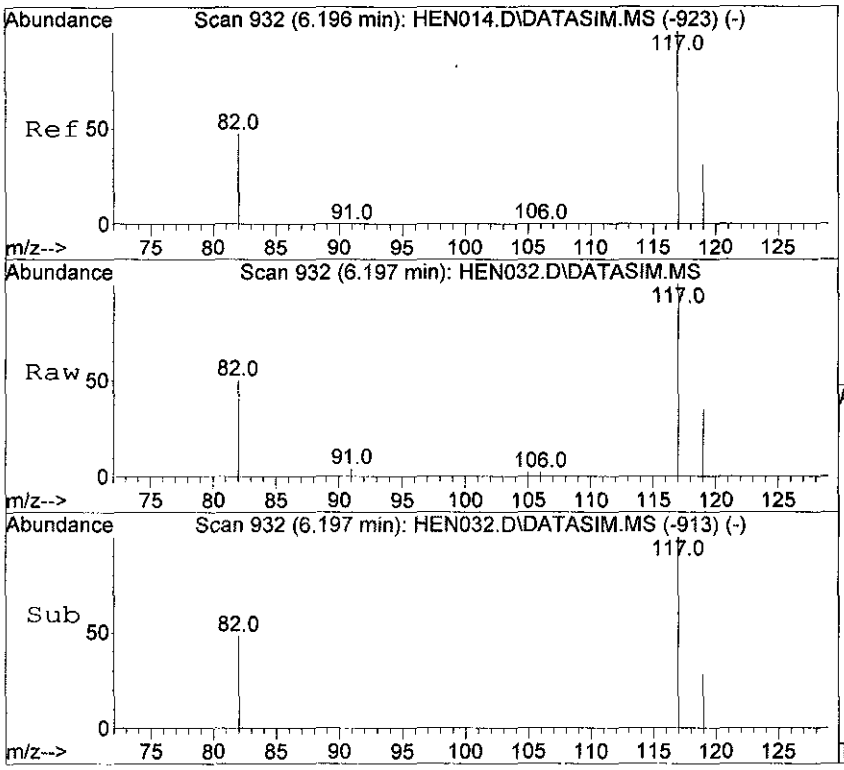


#11
Trichloroethene
Concen: 1129.15 ppbv
RT: 4.796 min Scan# 615
Delta R.T. -0.004 min
Lab File: HEN032.D
Acq: 21 Mar 2012 18:01

Tgt Ion:130 Resp: 162766

Ion	Ratio	Lower	Upper
130	100		
132	101.2	80.4	120.6
95	97.9	78.6	118.0

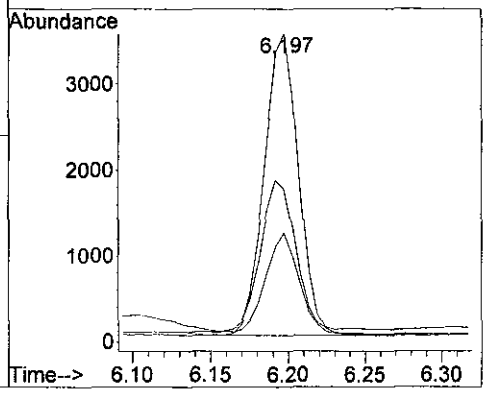


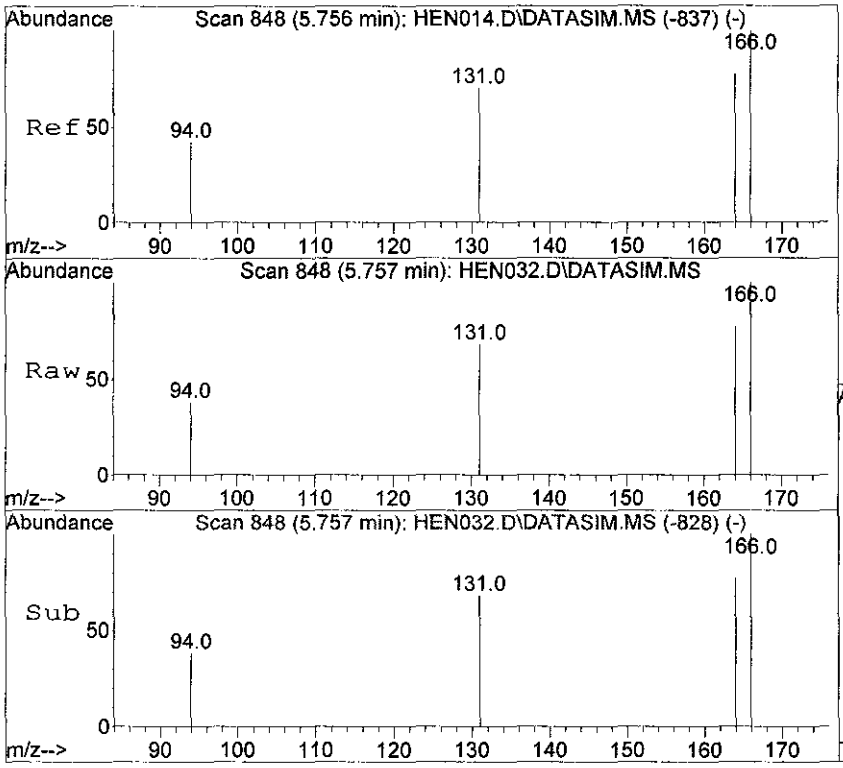


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN032.D
Acq: 21 Mar 2012 18:01

Tgt Ion:117 Resp: 5432

Ion	Ratio	Lower	Upper
117	100		
82	52.0	41.4	62.0
119	34.0	25.8	38.6

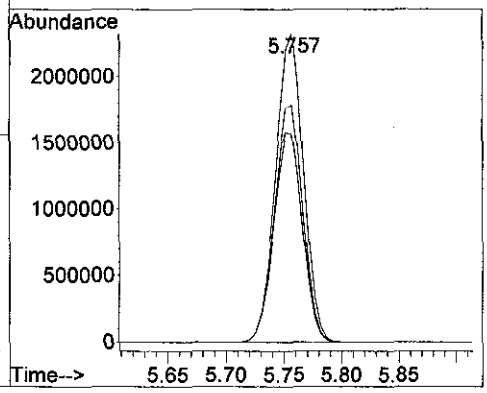




#14
Tetrachloroethene
Concen: 21751.90 ppbv
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN032.D
Acq: 21 Mar 2012 18:01

Tgt Ion:166 Resp: 3884538

Ion	Ratio	Lower	Upper
166	100		
164	77.9	62.5	93.7
131	69.7	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN033.D
Acq On : 21 Mar 2012 18:13
Operator : SJT
Sample : 51110 \ BLDG G-SS-01 10X
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 10

Quant Time: Mar 21 18:22:57 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

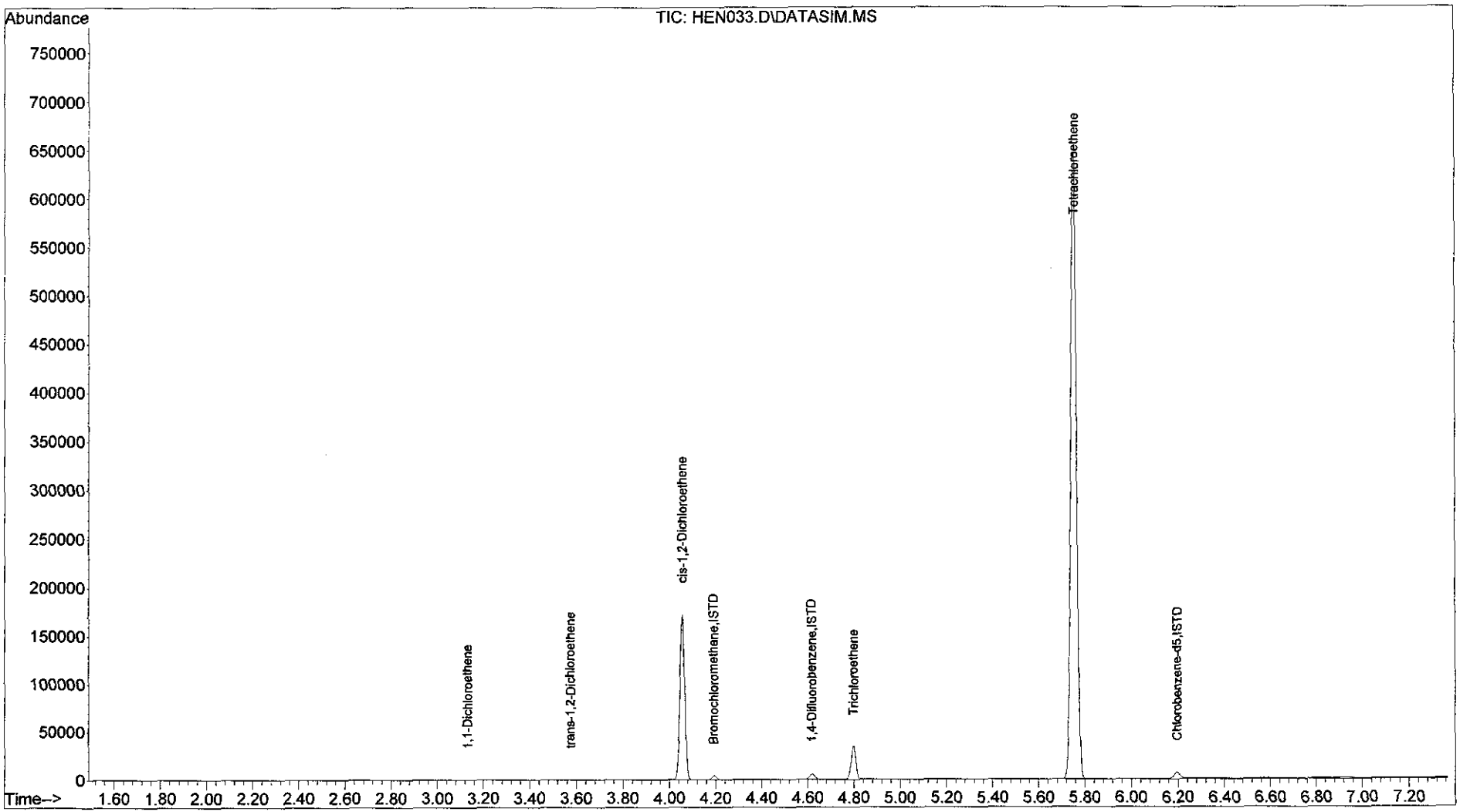
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.191	49	2320	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.618	114	5315	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	5614	10.00	ppbv	# 0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3) 1,1-Dichloroethene	3.132	61	138m	7.90	ppbv	
5) trans-1,2-Dichloroethene	3.574	61	202m	12.96	ppbv	
7) cis-1,2-Dichloroethene	4.058	61	113620	7630.60	ppbv	100
11) Trichloroethene	4.799	130	16062	1122.44	ppbv	100
14) Tetrachloroethene	5.756	166	379331	20552.44	ppbv	100

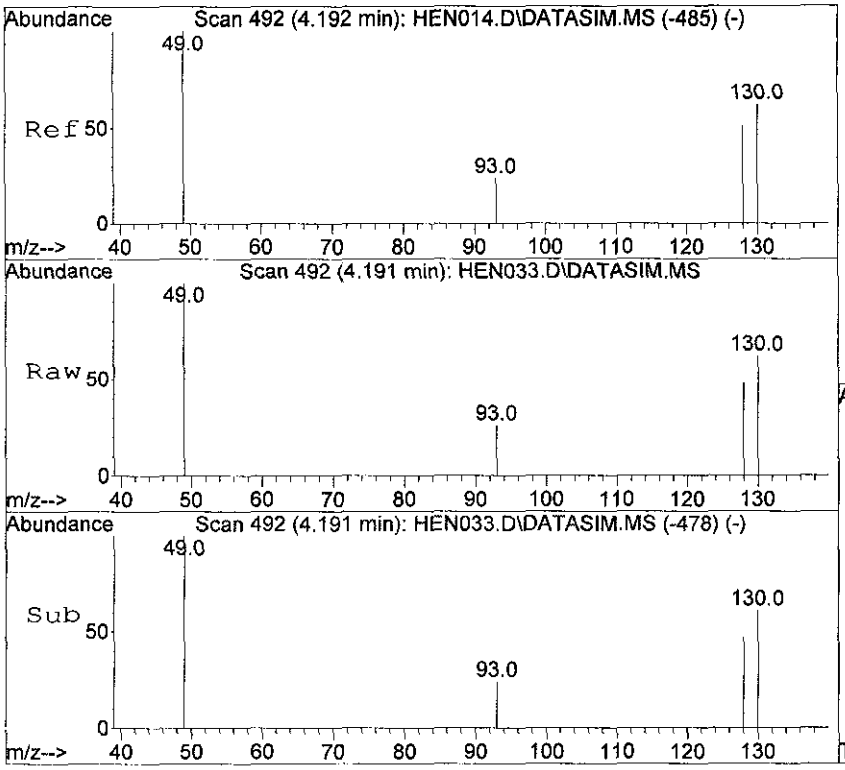
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN033.D
Acq On : 21 Mar 2012 18:13
Operator : SJT
Sample : 51110 \ BLDG G-SS-01 10X
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 10

Quant Time: Mar 21 18:22:57 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

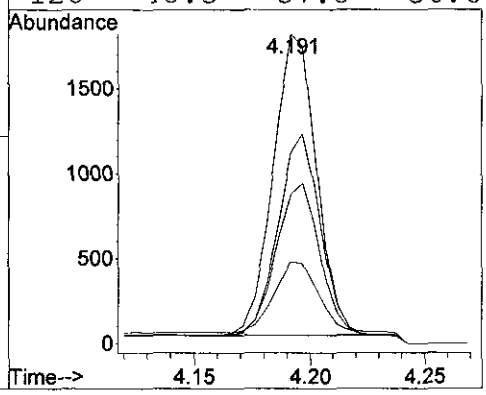


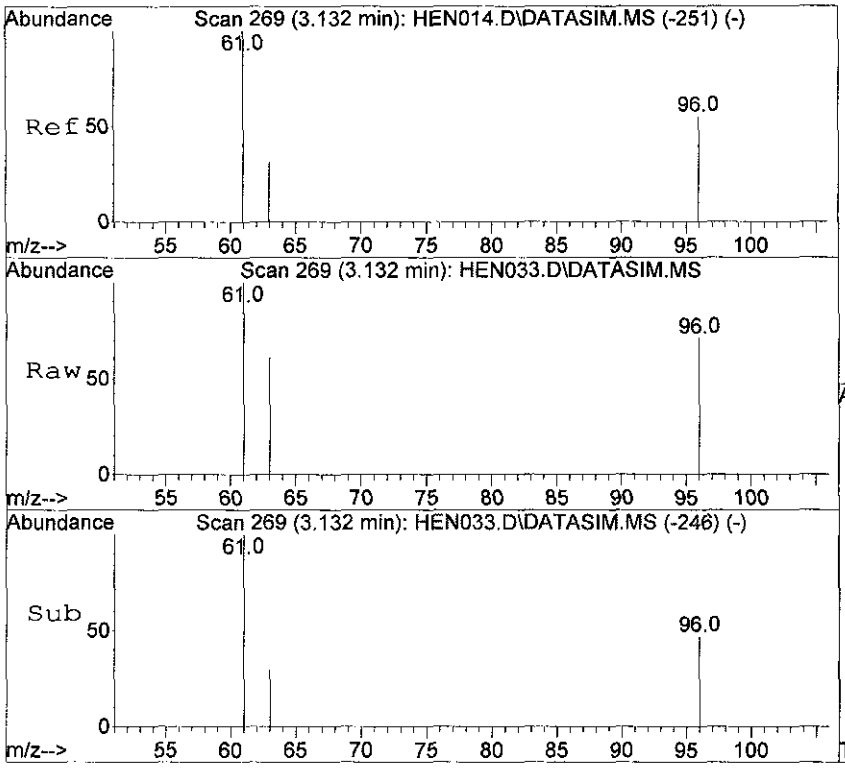


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.191 min Scan# 492
Delta R.T. -0.001 min
Lab File: HEN033.D
Acq: 21 Mar 2012 18:13

Tgt Ion: 49 Resp: 2320

Ion	Ratio	Lower	Upper
49	100		
130	61.7	46.5	69.7
93	26.4	19.0	28.6
128	48.3	37.8	56.6

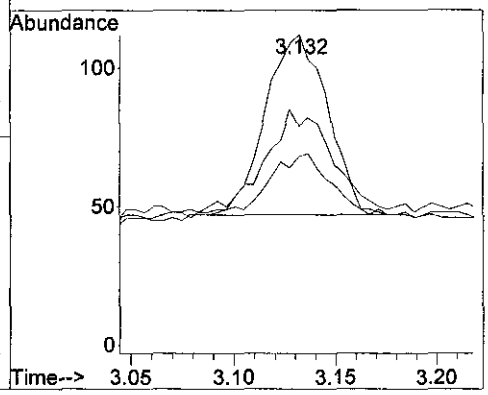


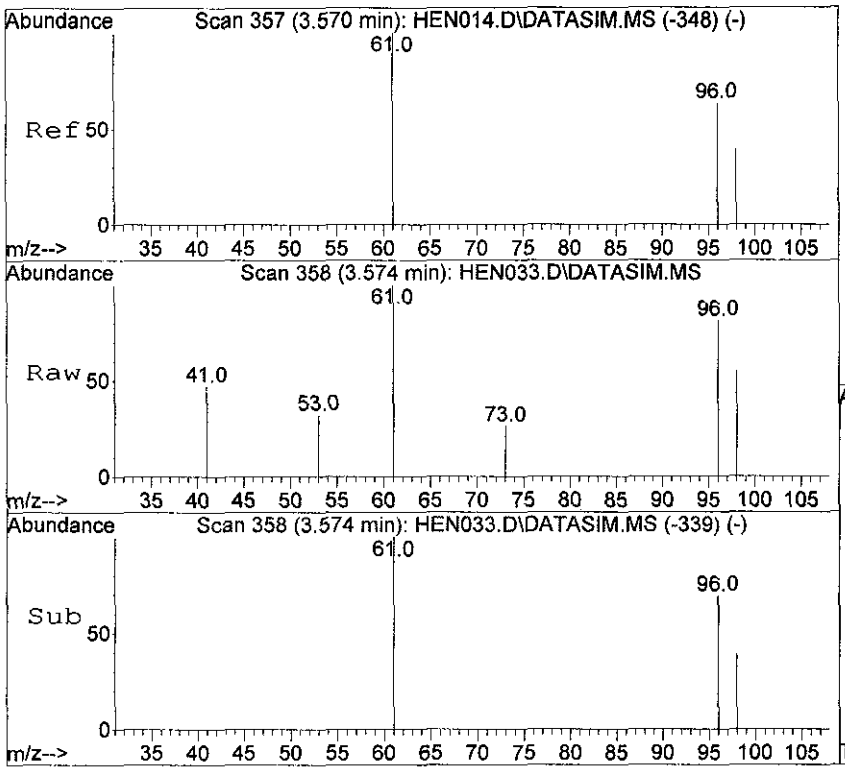


#3
1,1-Dichloroethene
Concen: 7.90 ppbv m
RT: 3.132 min Scan# 269
Delta R.T. 0.000 min
Lab File: HEN033.D
Acq: 21 Mar 2012 18:13

Tgt Ion: 61 Resp: 138

Ion	Ratio	Lower	Upper
61	100		
96	62.3	43.8	65.6
63	38.4	25.1	37.7#

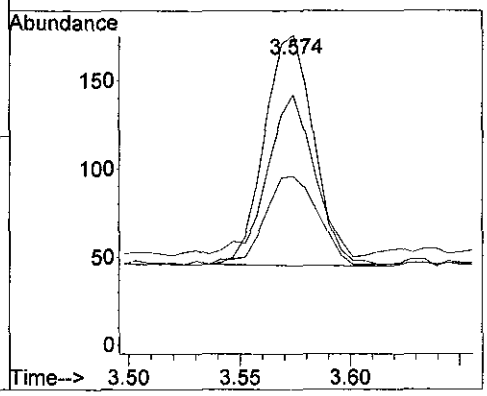


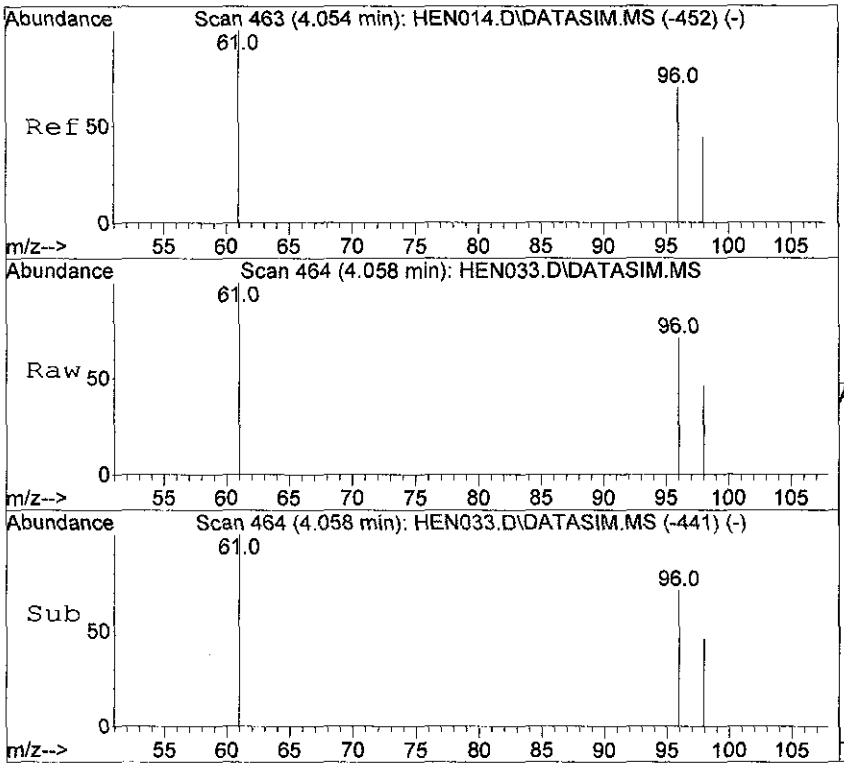


#5
trans-1,2-Dichloroethene
Concen: 12.96 ppbv m
RT: 3.574 min Scan# 358
Delta R.T. 0.005 min
Lab File: HEN033.D
Acq: 21 Mar 2012 18:13

Tgt Ion: 61 Resp: 202

Ion	Ratio	Lower	Upper
61	100		
96	64.4	51.3	76.9
98	38.6	32.7	49.1

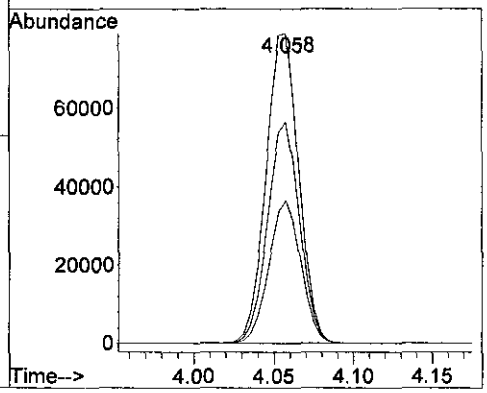


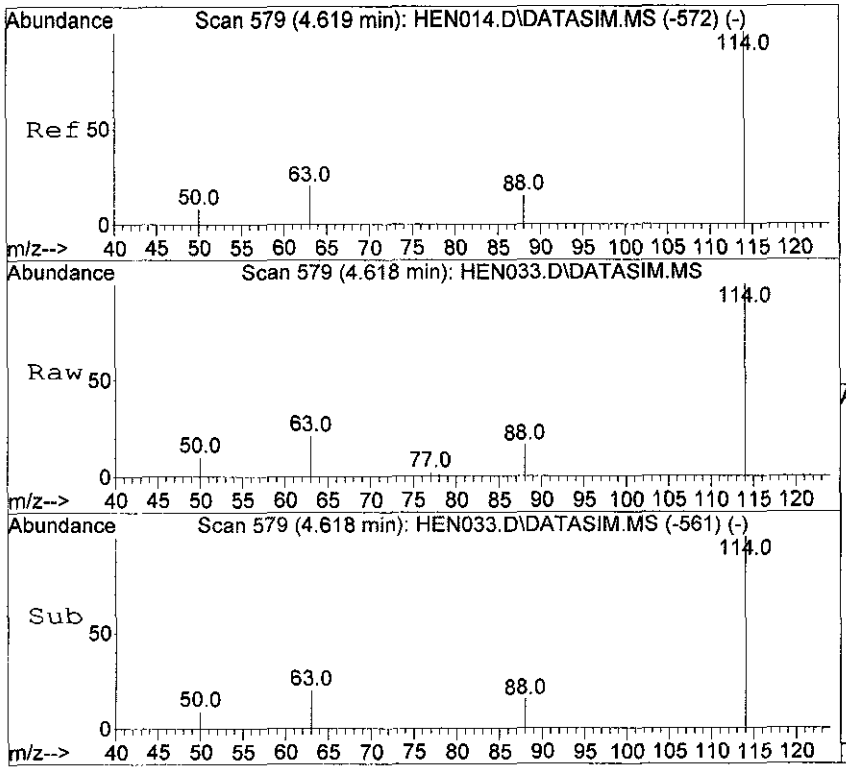


#7
cis-1,2-Dichloroethene
Concen: 7630.60 ppbv
RT: 4.058 min Scan# 464
Delta R.T. 0.004 min
Lab File: HEN033.D
Acq: 21 Mar 2012 18:13

Tgt Ion: 61 Resp: 113620

Ion	Ratio	Lower	Upper
61	100		
96	70.3	56.2	84.4
98	45.4	36.0	54.0

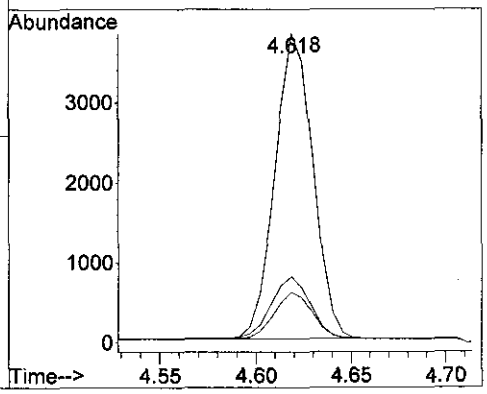


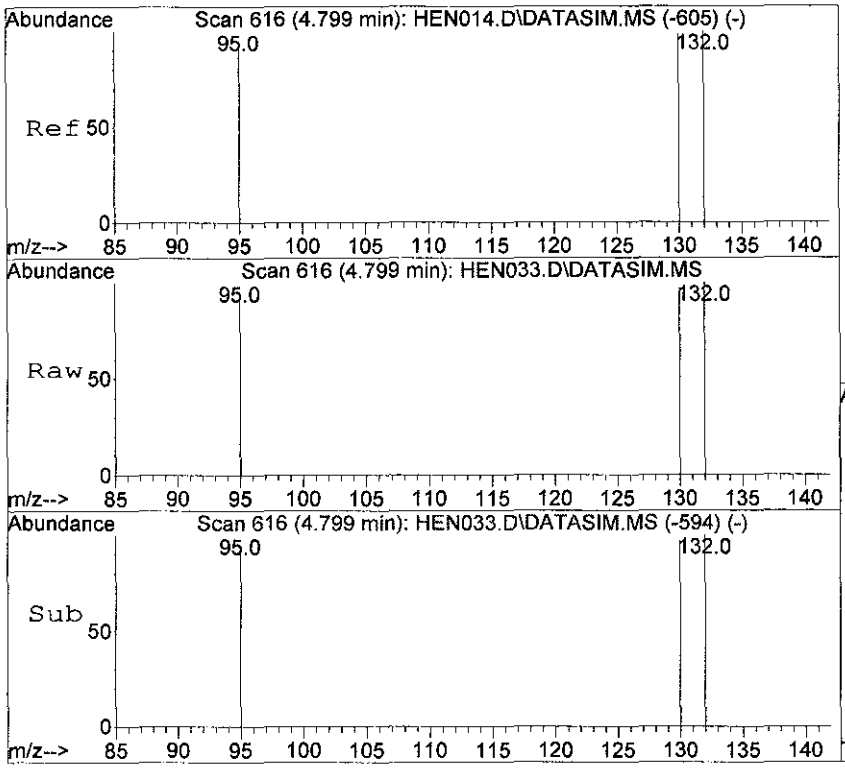


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.618 min Scan# 579
Delta R.T. -0.001 min
Lab File: HEN033.D
Acq: 21 Mar 2012 18:13

Tgt Ion:114 Resp: 5315

Ion	Ratio	Lower	Upper
114	100		
63	20.5	16.7	25.1
88	15.3	12.2	18.2

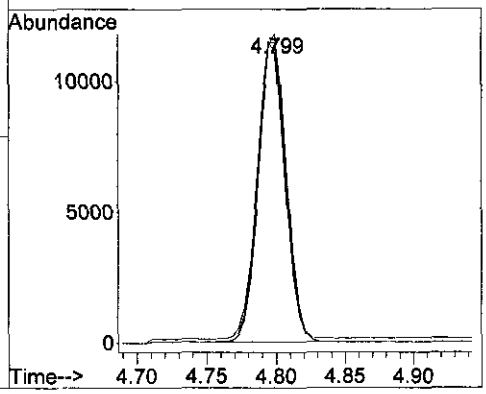


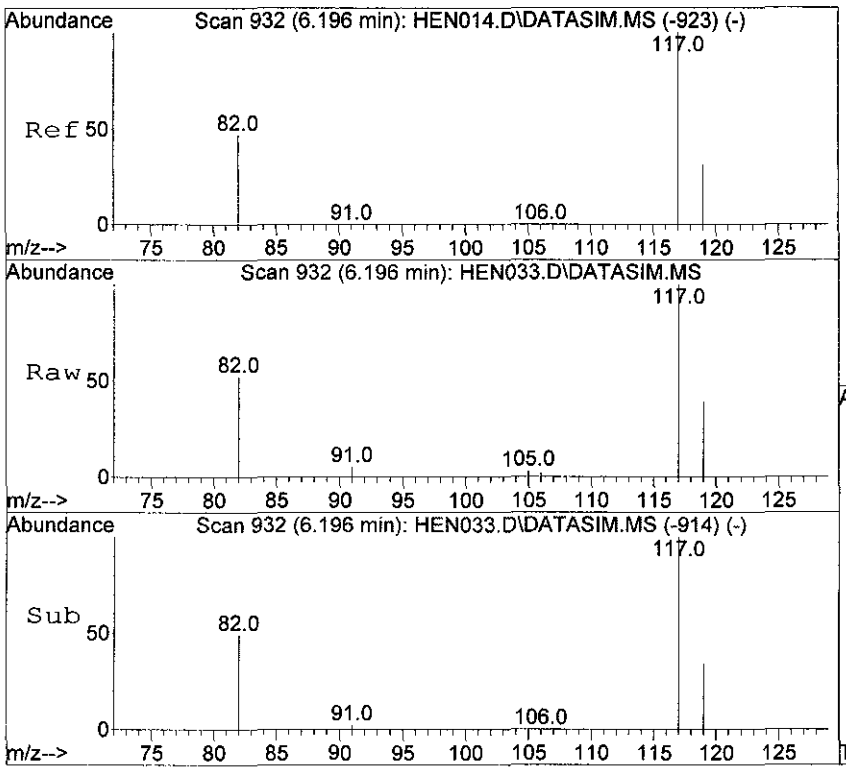


#11
Trichloroethene
Concen: 1122.44 ppbv
RT: 4.799 min Scan# 616
Delta R.T. 0.000 min
Lab File: HEN033.D
Acq: 21 Mar 2012 18:13

Tgt Ion:130 Resp: 16062

Ion	Ratio	Lower	Upper
130	100		
132	100.8	80.4	120.6
95	98.0	78.6	118.0

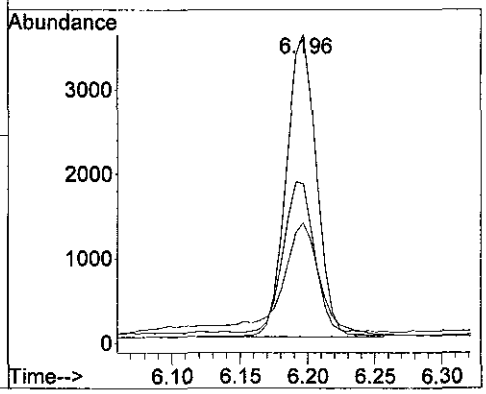


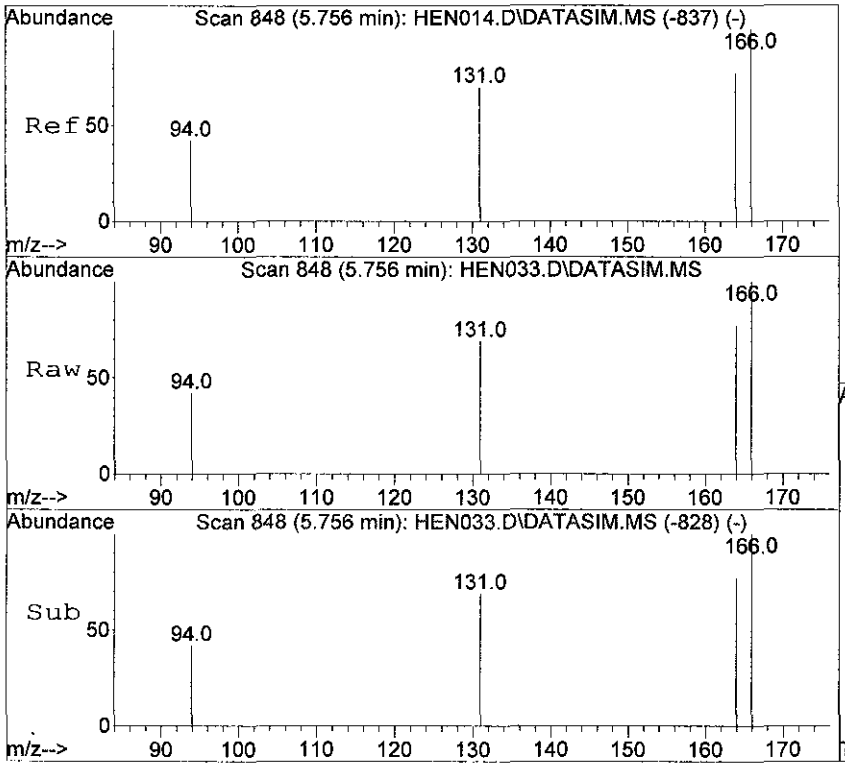


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. 0.000 min
Lab File: HEN033.D
Acq: 21 Mar 2012 18:13

Tgt Ion:117 Resp: 5614

Ion	Ratio	Lower	Upper
117	100		
82	51.1	41.4	62.0
119	47.8	25.8	38.6#

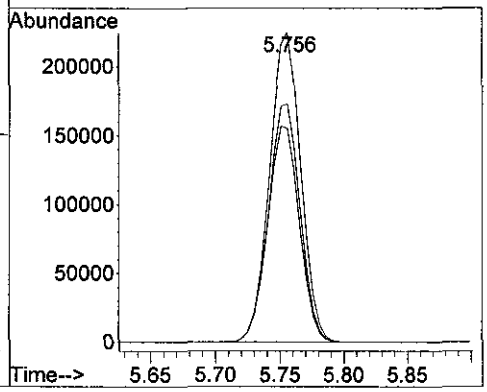




#14
Tetrachloroethene
Concen: 20552.44 ppbv
RT: 5.756 min Scan# 848
Delta R.T. 0.000 min
Lab File: HEN033.D
Acq: 21 Mar 2012 18:13

Tgt Ion:166 Resp: 379331

Ion	Ratio	Lower	Upper
166	100		
164	78.1	62.5	93.7
131	70.9	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN034.D
Acq On : 21 Mar 2012 18:25
Operator : SJT
Sample : 51111 \ BLDG P1-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 18:40:45 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

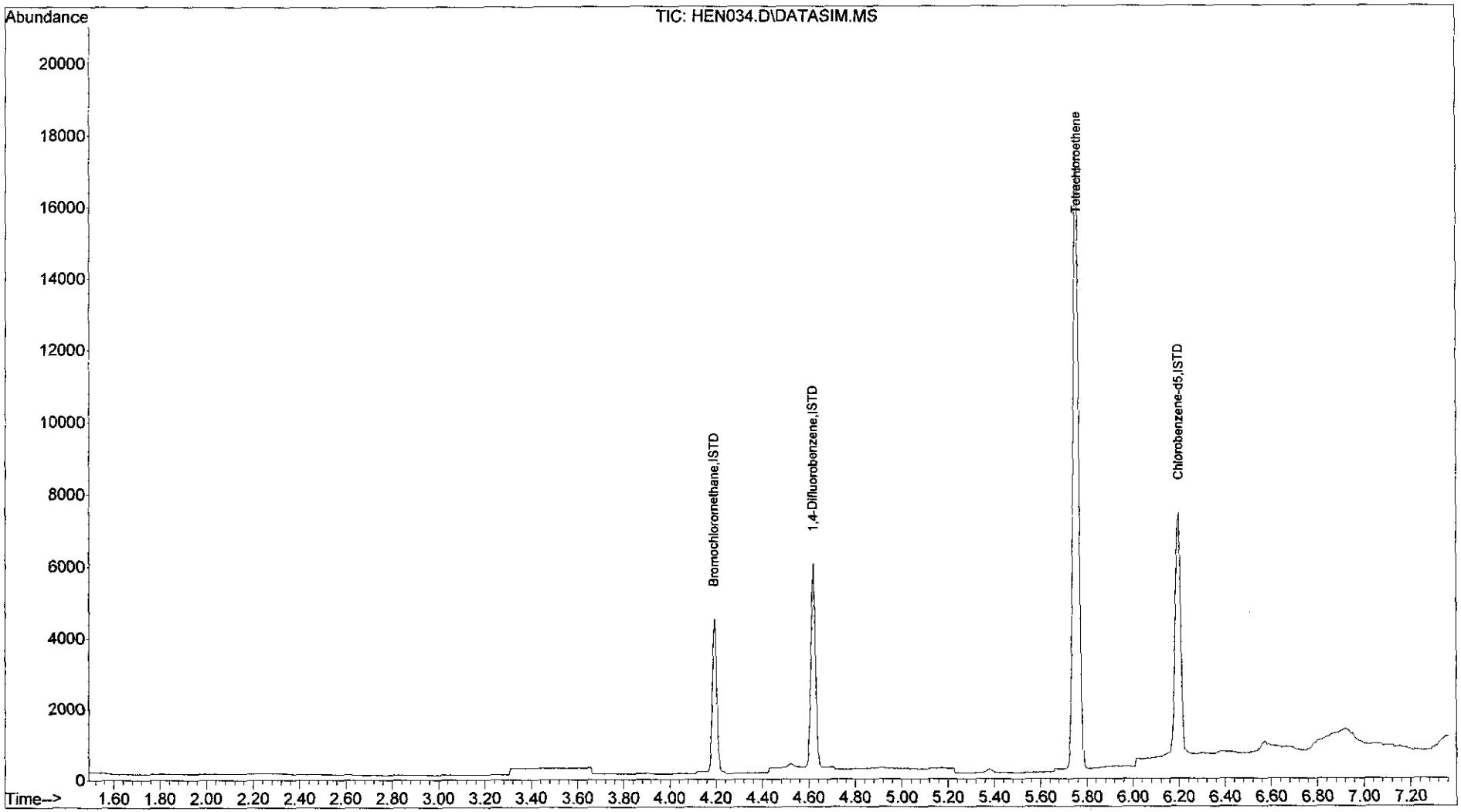
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.192	49	2346	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5443	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.198	117	5708m	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
14) Tetrachloroethene	5.757	166	9993	53.25 ppbv	99

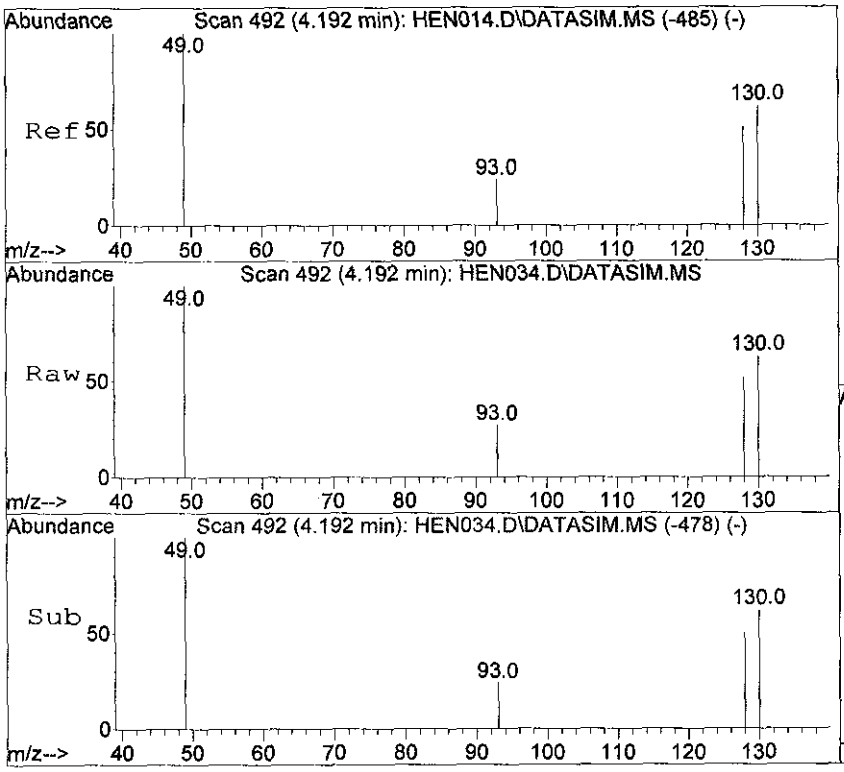
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN034.D
Acq On : 21 Mar 2012 18:25
Operator : SJT
Sample : 51111 \ BLDG P1-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 18:40:45 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

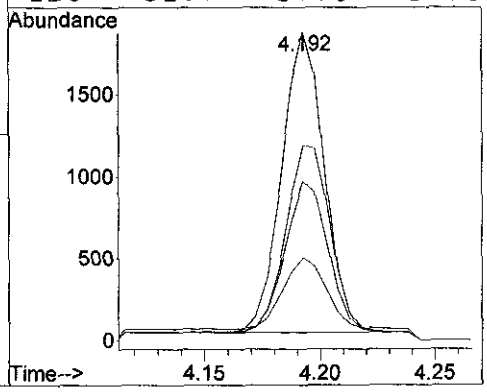


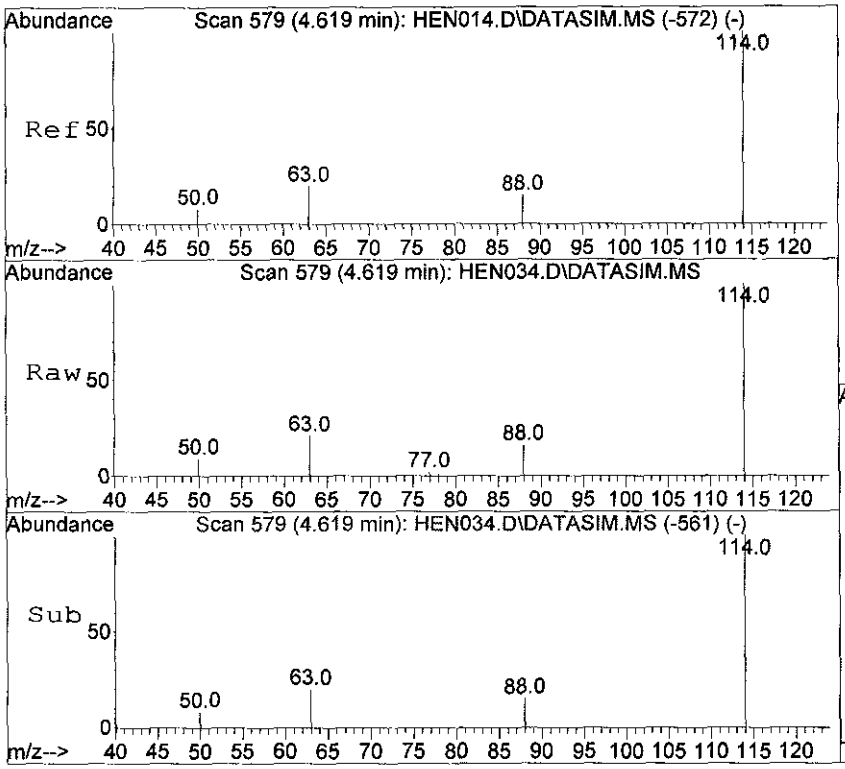


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN034.D
Acq: 21 Mar 2012 18:25

Tgt Ion: 49 Resp: 2346

Ion	Ratio	Lower	Upper
49	100		
130	63.3	46.5	69.7
93	26.8	19.0	28.6
128	51.7	37.8	56.6

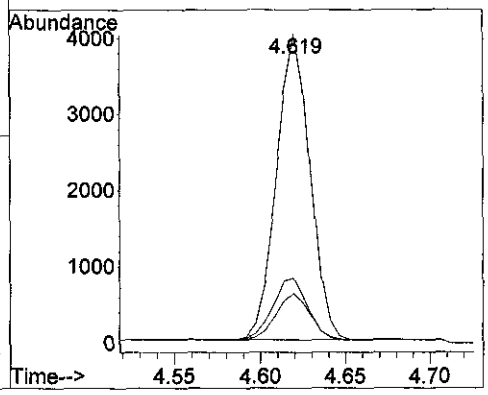


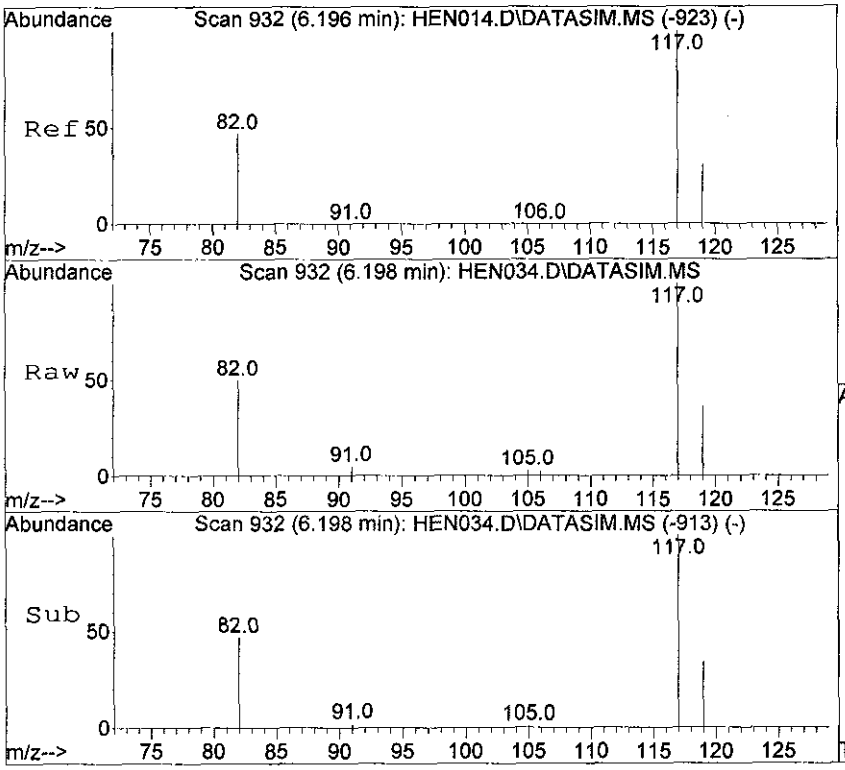


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN034.D
Acq: 21 Mar 2012 18:25

Tgt Ion:114 Resp: 5443

Ion	Ratio	Lower	Upper
114	100		
63	20.5	16.7	25.1
88	15.2	12.2	18.2

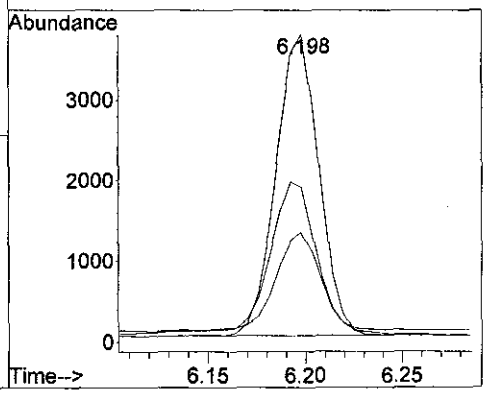


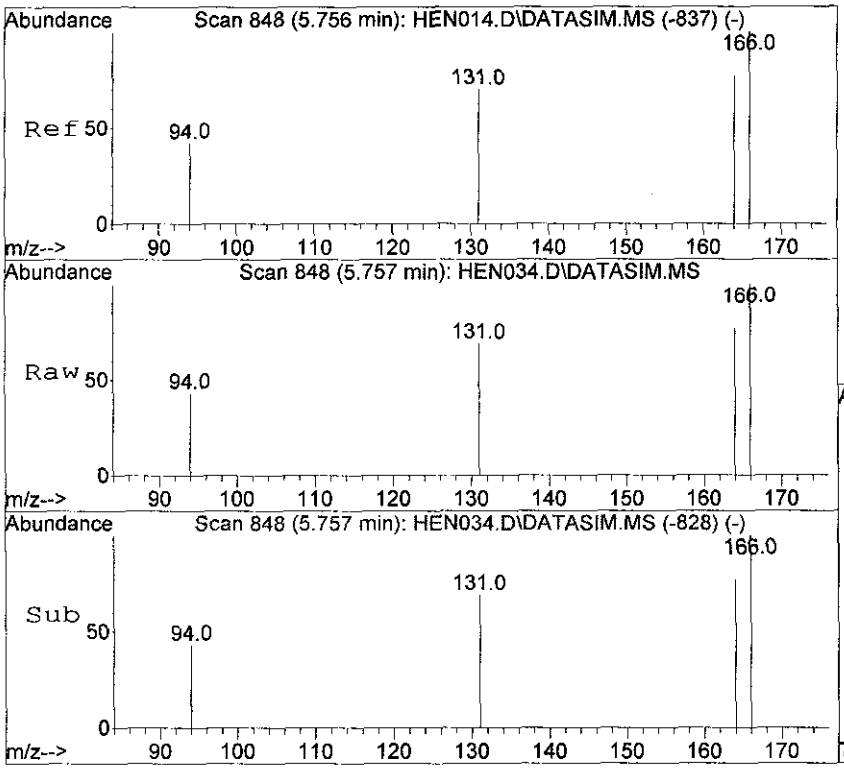


#12
Chlorobenzene-d5
Concen: 10.00 ppbv m
RT: 6.198 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN034.D
Acq: 21 Mar 2012 18:25

Tgt Ion:117 Resp: 5708

Ion	Ratio	Lower	Upper
117	100		
82	51.8	41.4	62.0
119	40.6	25.8	38.6#

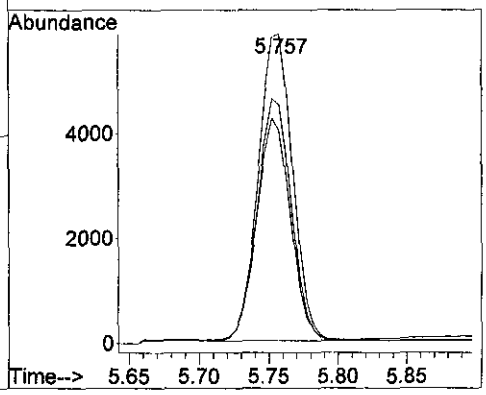




#14
Tetrachloroethene
Concen: 53.25 ppbv
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN034.D
Acq: 21 Mar 2012 18:25

Tgt Ion:166 Resp: 9993

Ion	Ratio	Lower	Upper
166	100		
164	78.4	62.5	93.7
131	70.6	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN035.D
Acq On : 21 Mar 2012 18:38
Operator : SJT
Sample : 51112 \ BLDG P1-SS-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 19:04:58 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

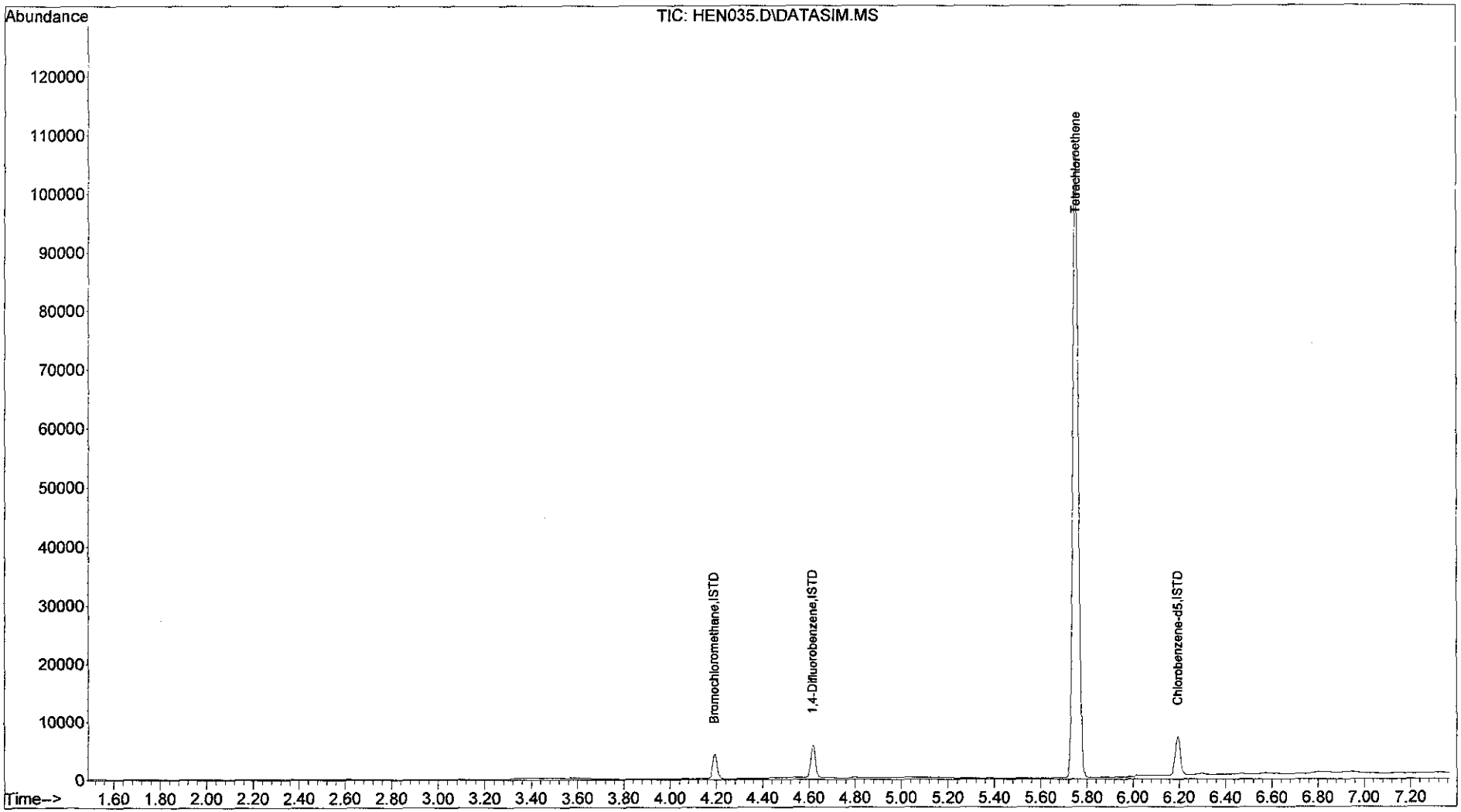
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.191	49	2325	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.618	114	5429	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	5634	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
14) Tetrachloroethene	5.756	166	60817	328.34	ppbv	100

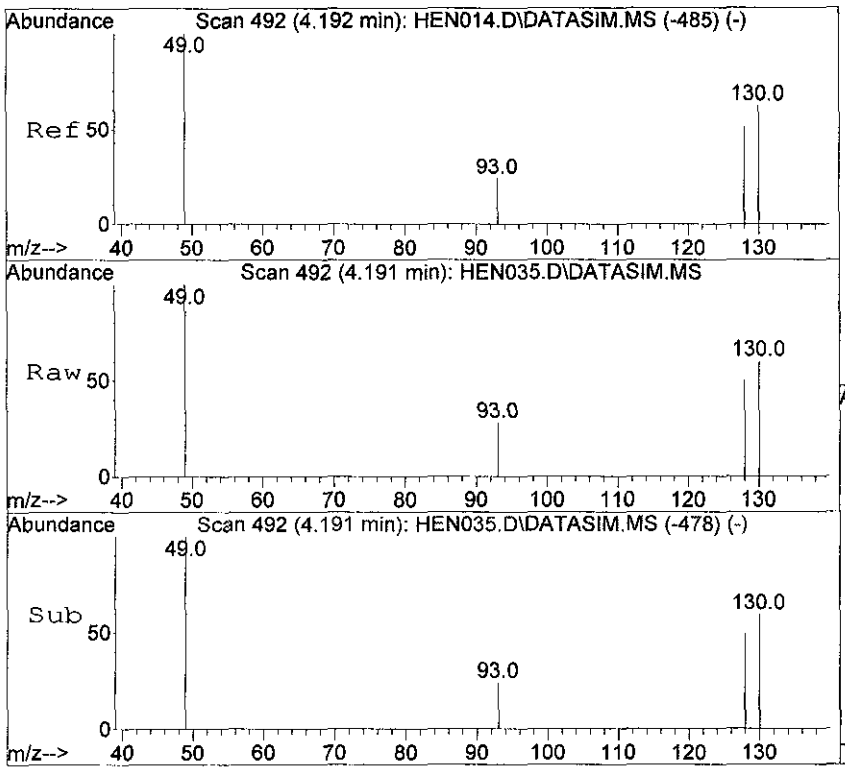
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN035.D
Acq On : 21 Mar 2012 18:38
Operator : SJT
Sample : 51112 \ BLDG P1-SS-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 19:04:58 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

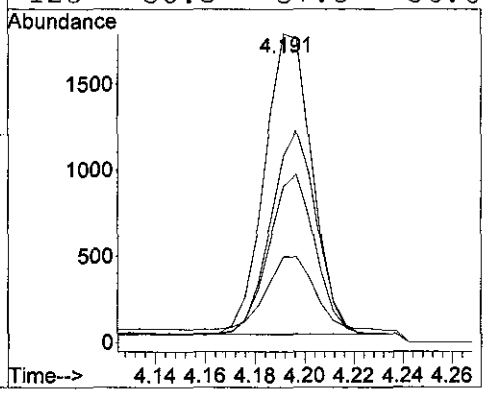


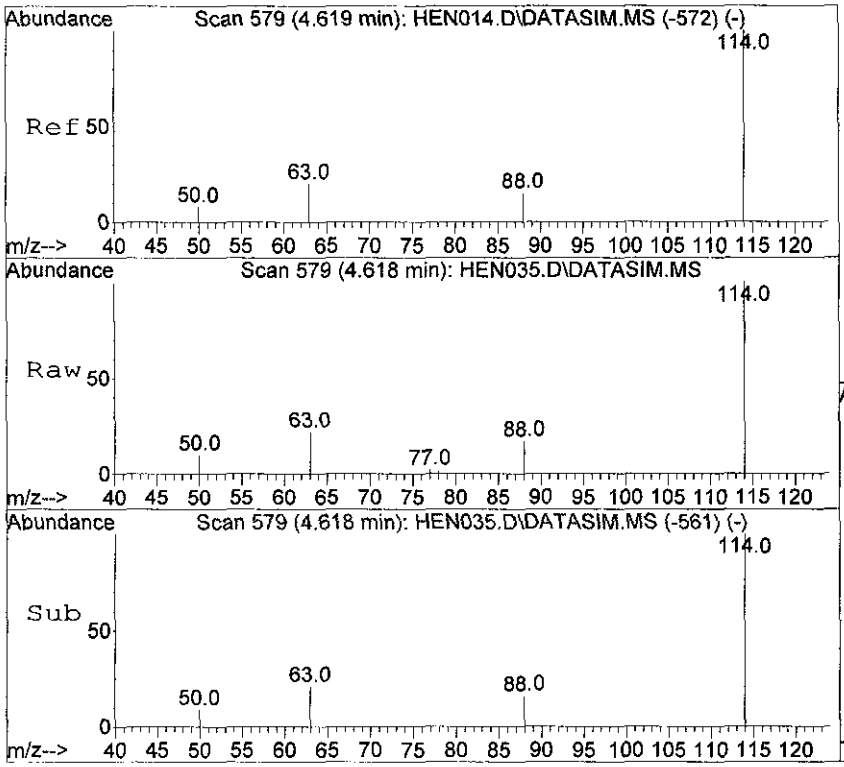


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.191 min Scan# 492
Delta R.T. -0.001 min
Lab File: HEN035.D
Acq: 21 Mar 2012 18:38

Tgt Ion: 49 Resp: 2325

Ion	Ratio	Lower	Upper
49	100		
130	60.3	46.5	69.7
93	27.7	19.0	28.6
128	50.3	37.8	56.6

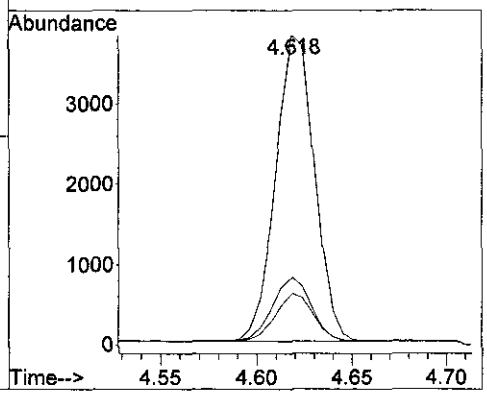


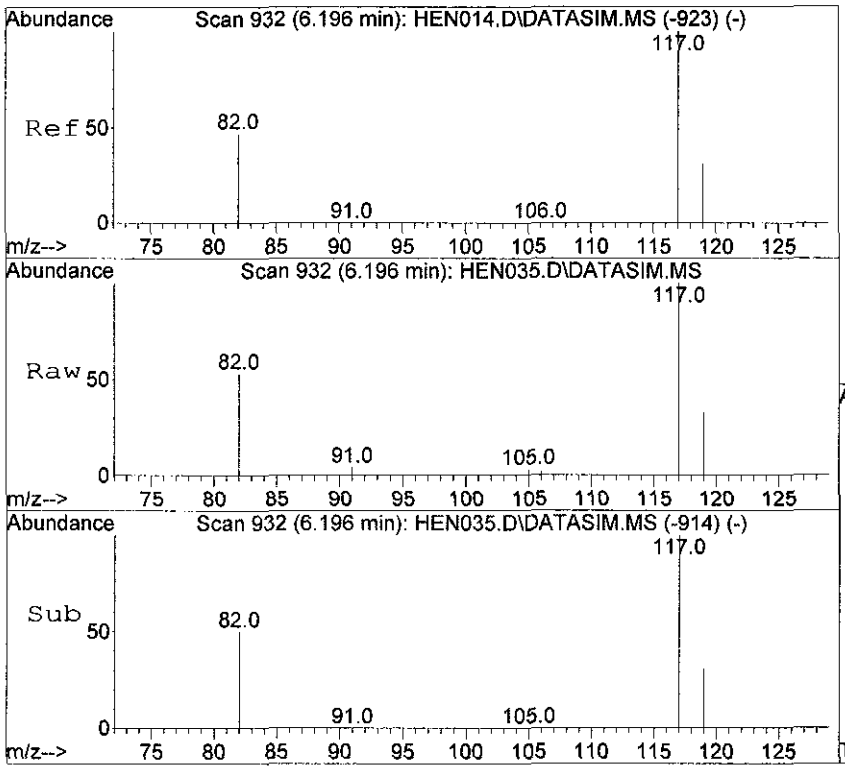


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.618 min Scan# 579
Delta R.T. -0.001 min
Lab File: HEN035.D
Acq: 21 Mar 2012 18:38

Tgt Ion:114 Resp: 5429

Ion	Ratio	Lower	Upper
114	100		
63	20.5	16.7	25.1
88	15.2	12.2	18.2

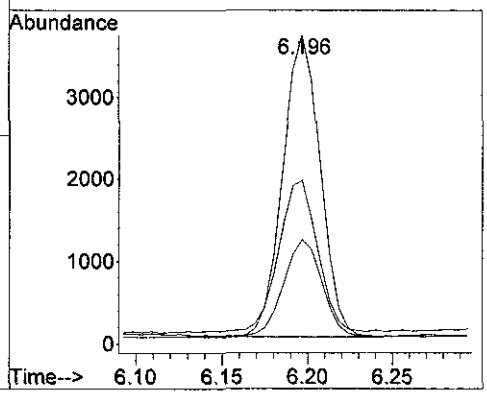


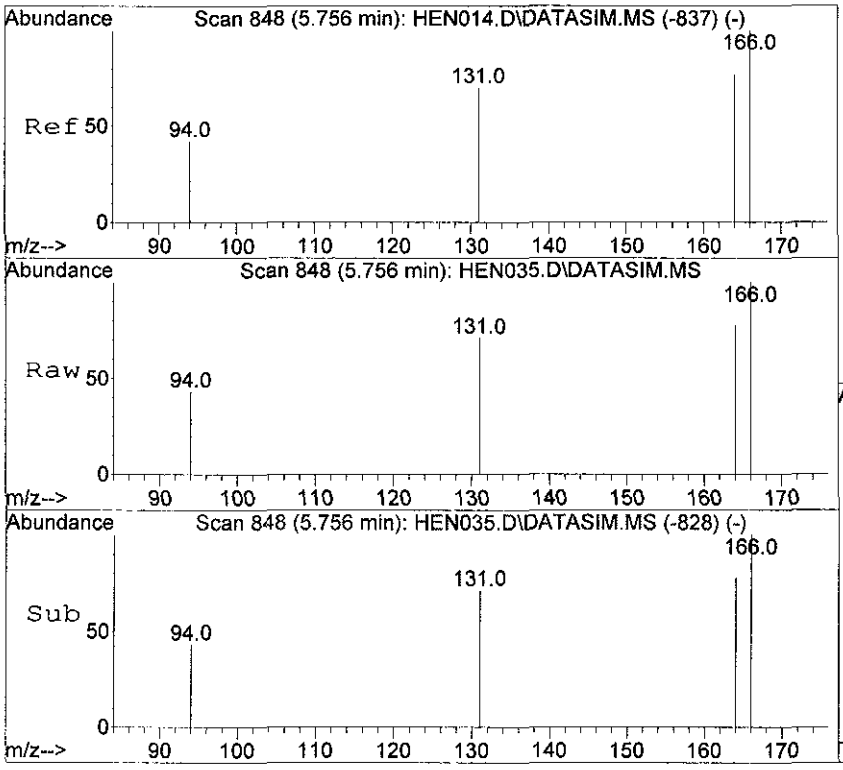


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. 0.000 min
Lab File: HEN035.D
Acq: 21 Mar 2012 18:38

Tgt Ion:117 Resp: 5634

Ion	Ratio	Lower	Upper
117	100		
82	52.4	41.4	62.0
119	32.5	25.8	38.6

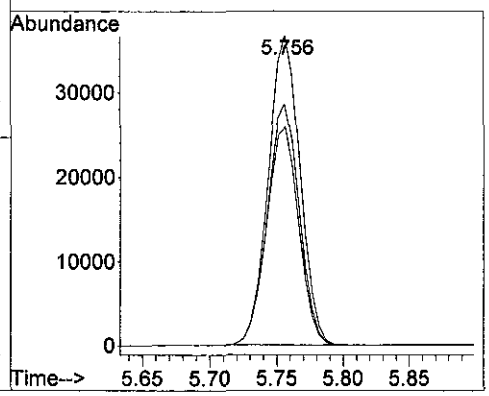




#14
Tetrachloroethene
Concen: 328.34 ppbv
RT: 5.756 min Scan# 848
Delta R.T. 0.000 min
Lab File: HEN035.D
Acq: 21 Mar 2012 18:38

Tgt Ion:166 Resp: 60817

Ion	Ratio	Lower	Upper
166	100		
164	78.2	62.5	93.7
131	71.4	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN036.D
Acq On : 21 Mar 2012 19:07
Operator : SJT
Sample : 51113 \ BLDG 3-SS-1-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 19:31:35 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

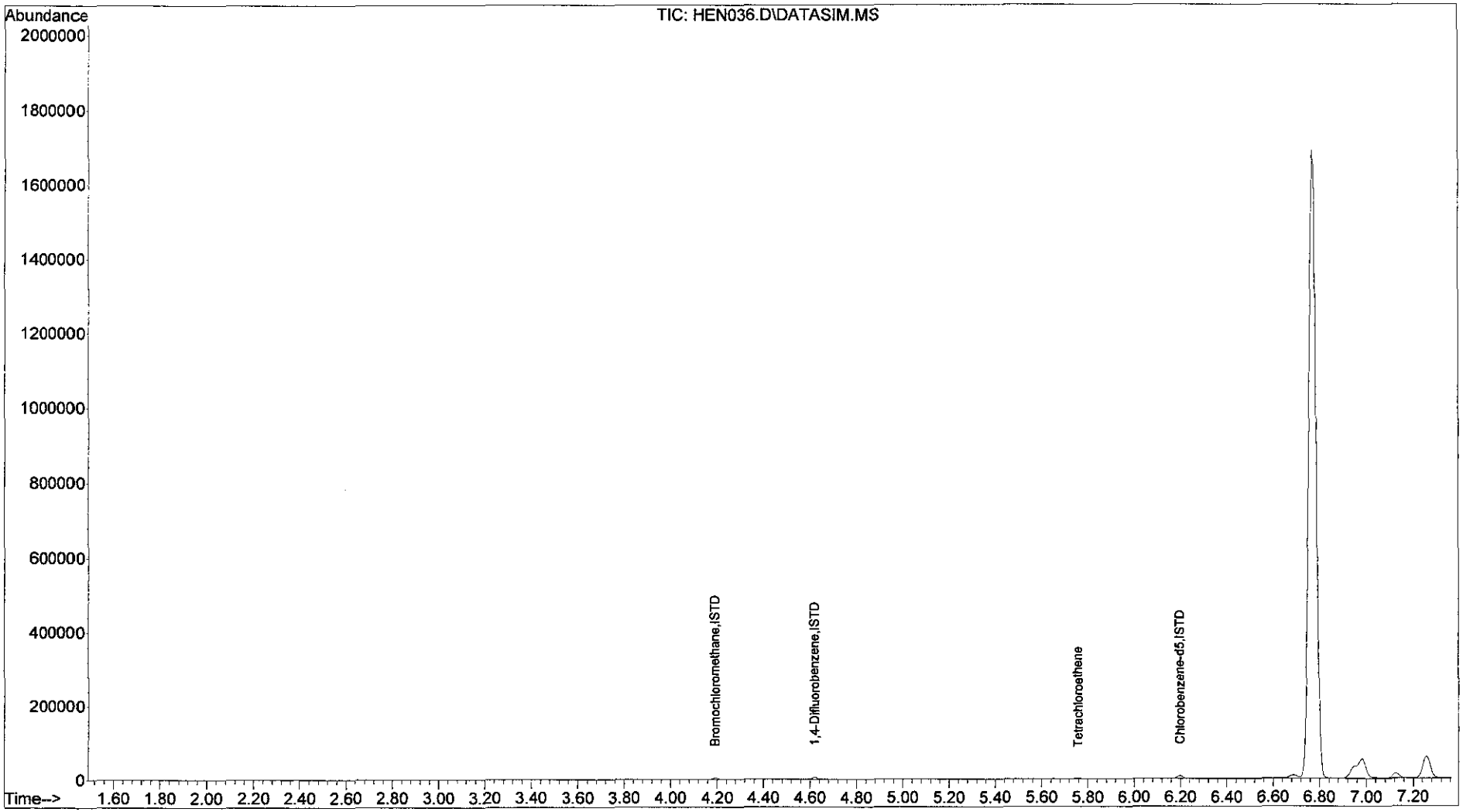
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.192	49	2404	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5545	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.197	117	5856m	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
14) Tetrachloroethene	5.757	166	116m	0.60 ppbv	

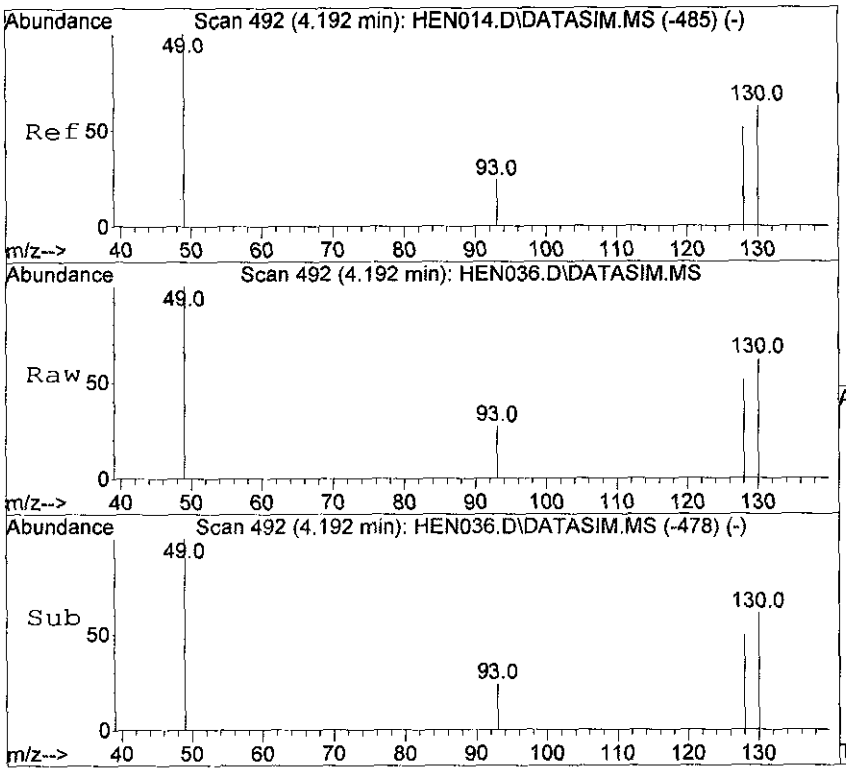
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN036.D
Acq On : 21 Mar 2012 19:07
Operator : SJT
Sample : 51113 \ BLDG 3-SS-1-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 19:31:35 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

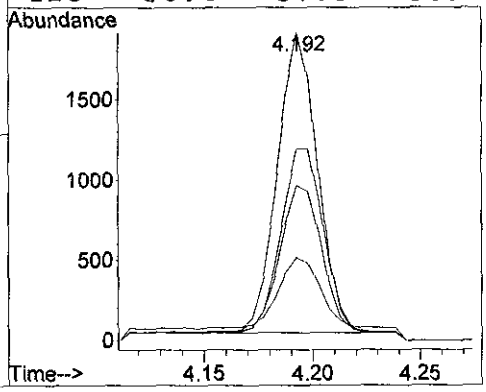


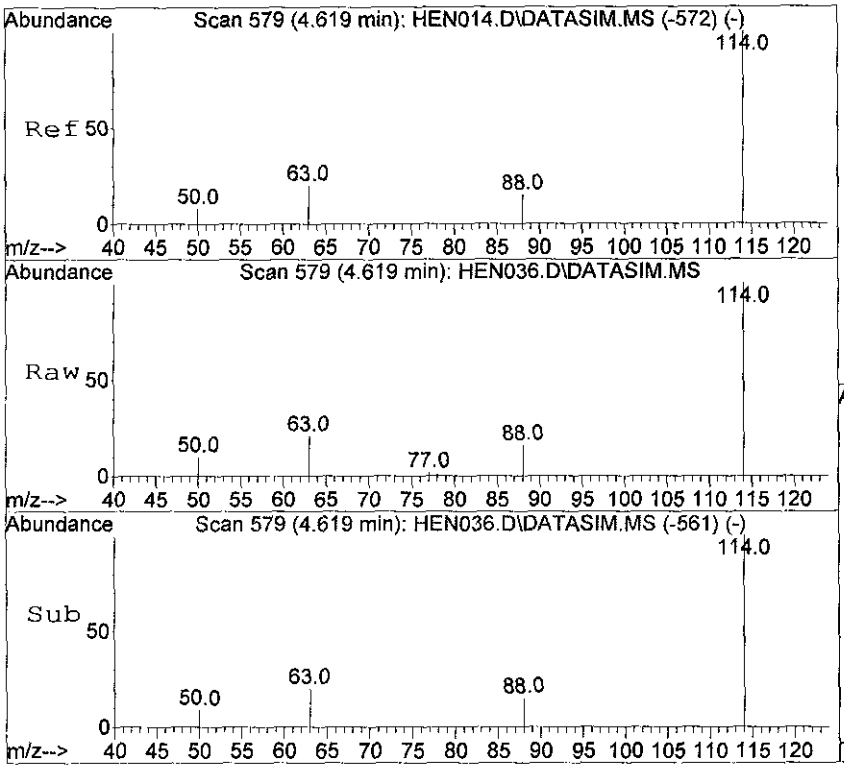


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN036.D
Acq: 21 Mar 2012 19:07

Tgt Ion: 49 Resp: 2404

Ion	Ratio	Lower	Upper
49	100		
130	62.3	46.5	69.7
93	27.0	19.0	28.6
128	50.6	37.8	56.6

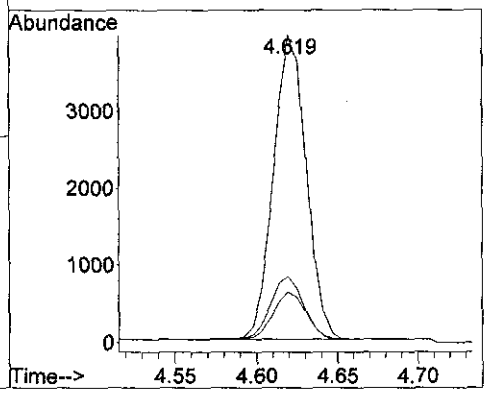


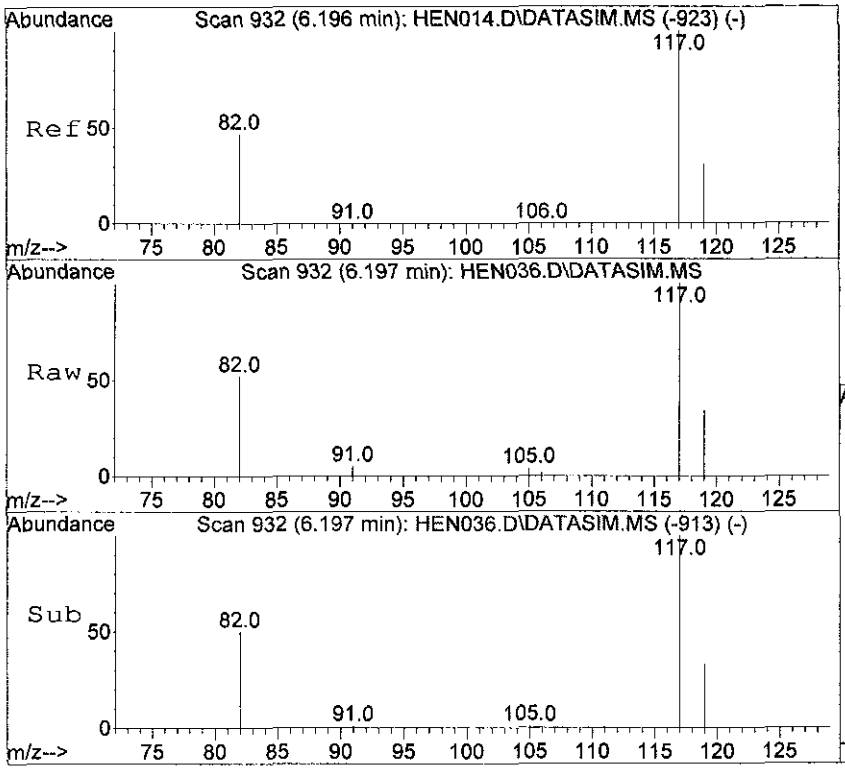


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN036.D
Acq: 21 Mar 2012 19:07

Tgt Ion:114 Resp: 5545

Ion	Ratio	Lower	Upper
114	100		
63	20.5	16.7	25.1
88	15.4	12.2	18.2

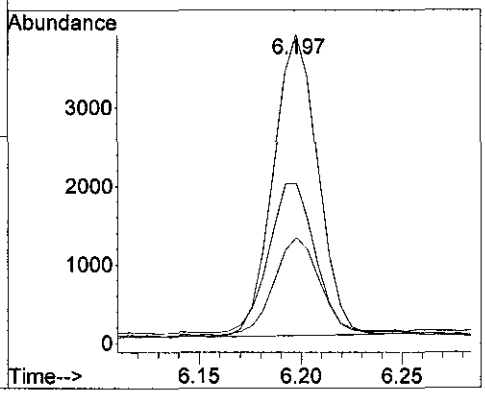


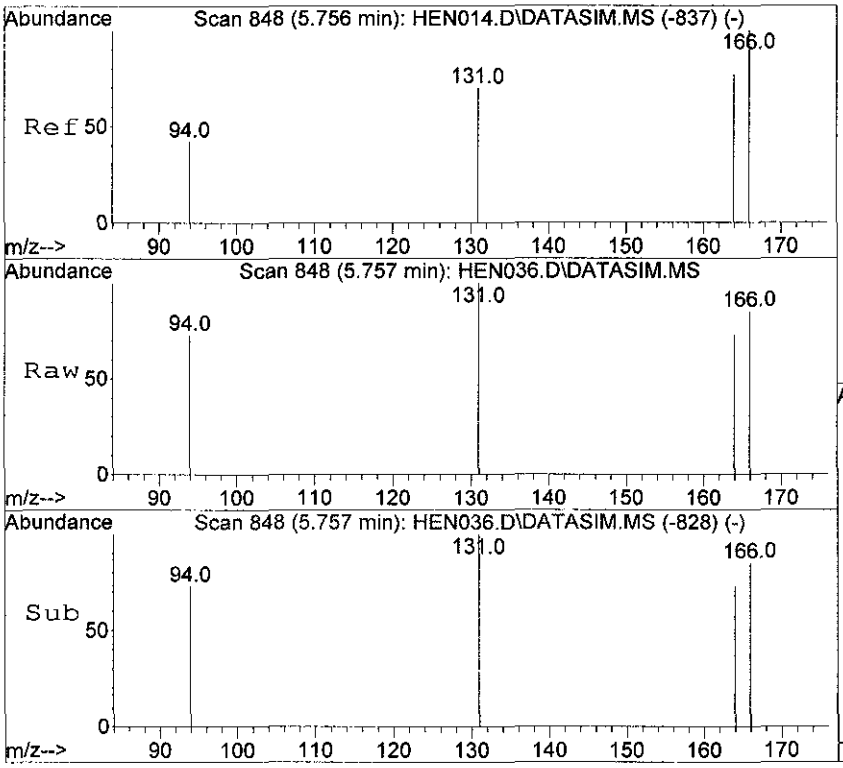


#12
Chlorobenzene-d5
Concen: 10.00 ppbv m
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN036.D
Acq: 21 Mar 2012 19:07

Tgt Ion:117 Resp: 5856

Ion	Ratio	Lower	Upper
117	100		
82	51.5	41.4	62.0
119	36.5	25.8	38.6

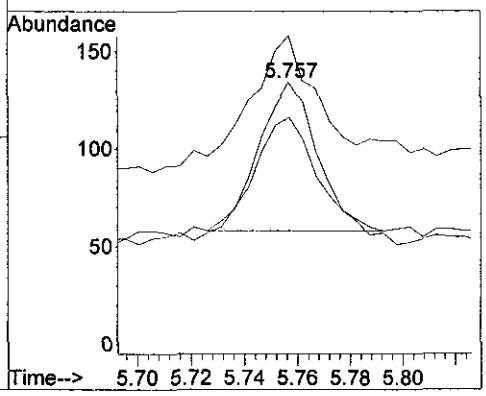




#14
Tetrachloroethene
Concen: 0.60 ppbv m
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN036.D
Acq: 21 Mar 2012 19:07

Tgt Ion:166 Resp: 116

Ion	Ratio	Lower	Upper
166	100		
164	98.3	62.5	93.7#
131	95.7	57.0	85.4#



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN037.D
Acq On : 21 Mar 2012 19:19
Operator : SJT
Sample : 51114 \ BLDG 3-SS-1-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 19:28:07 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.192	49	2388	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5486	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	6137	10.00	ppbv	0.00

System Monitoring Compounds

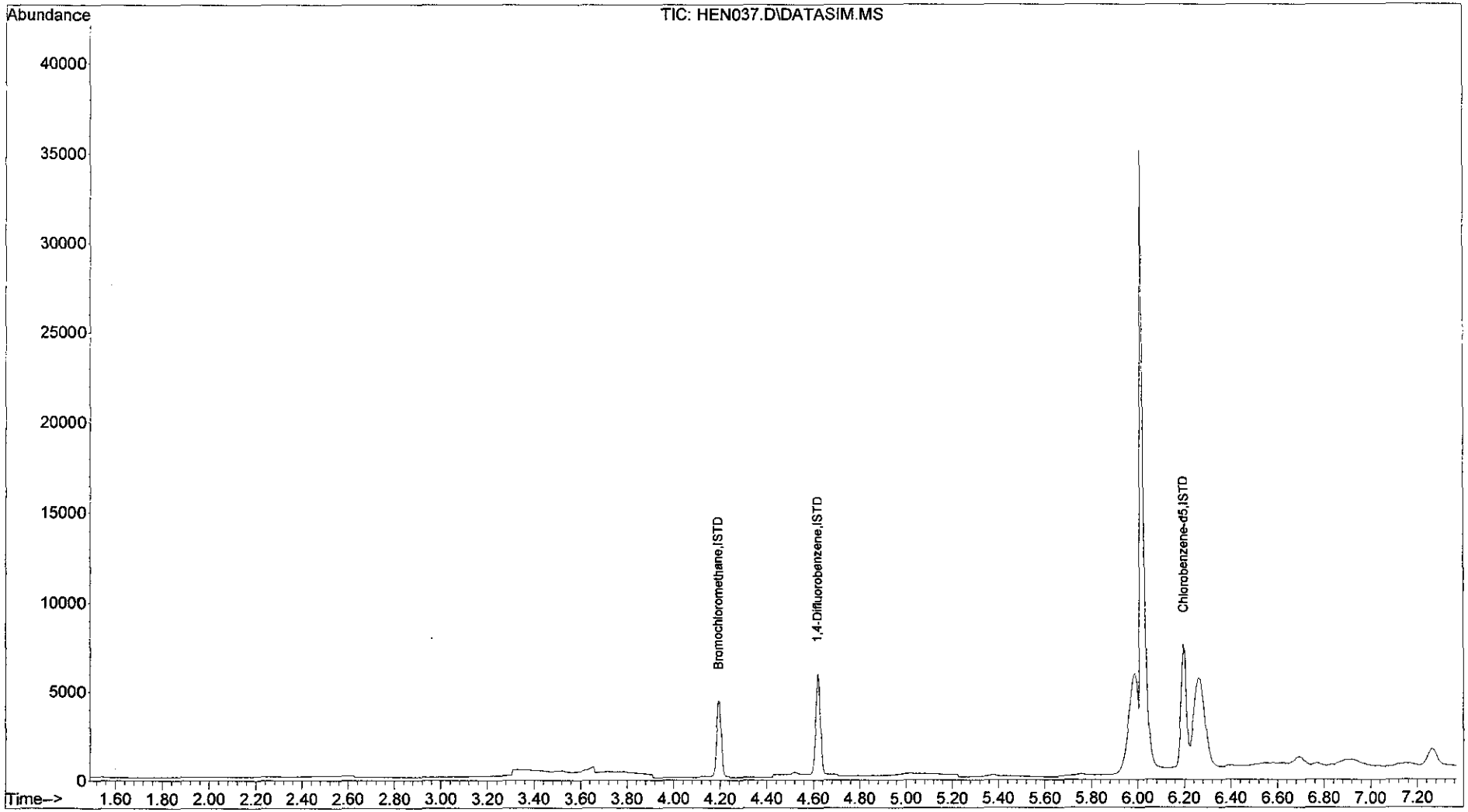
Target Compounds	Qvalue

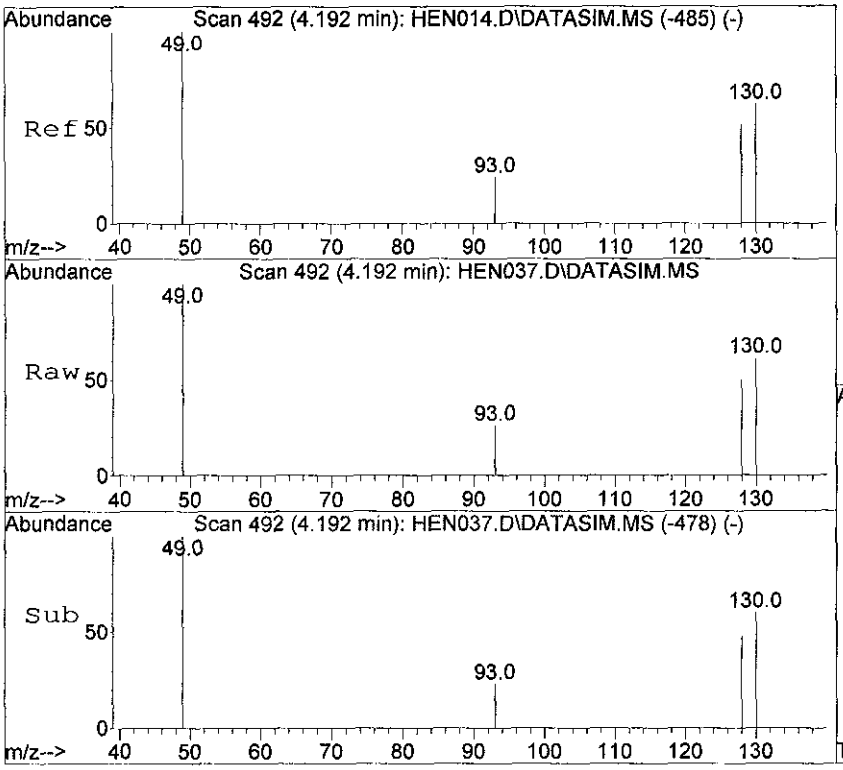
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN037.D
Acq On : 21 Mar 2012 19:19
Operator : SJT
Sample : 51114 \ BLDG 3-SS-1-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 19:28:07 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

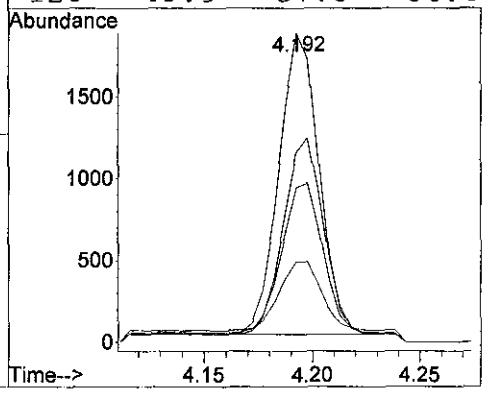


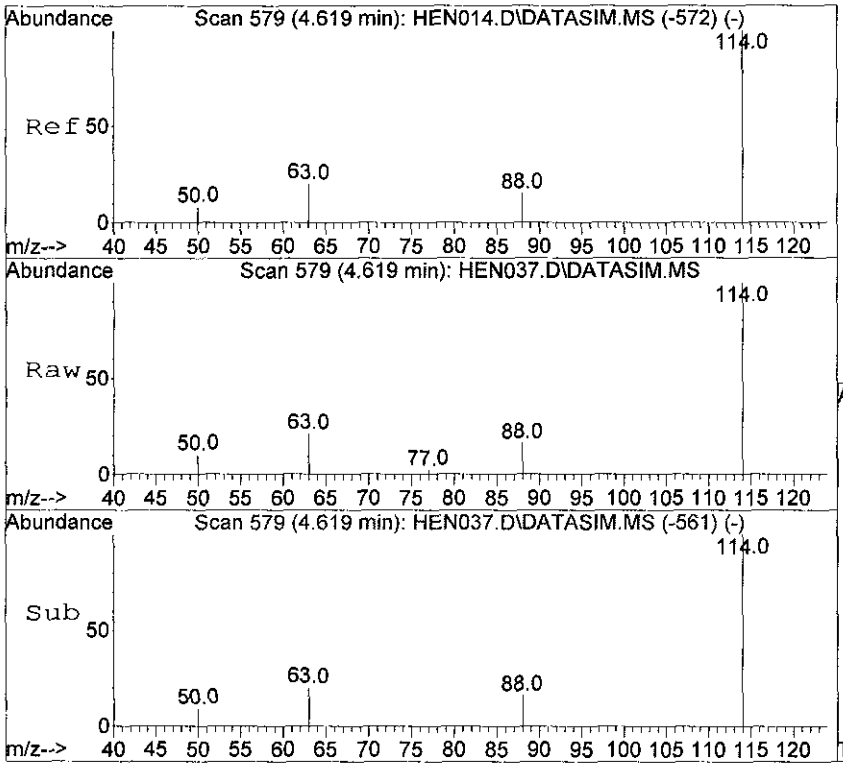


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN037.D
Acq: 21 Mar 2012 19:19

Tgt Ion: 49 Resp: 2388

Ion	Ratio	Lower	Upper
49	100		
130	61.1	46.5	69.7
93	26.1	19.0	28.6
128	49.9	37.8	56.6

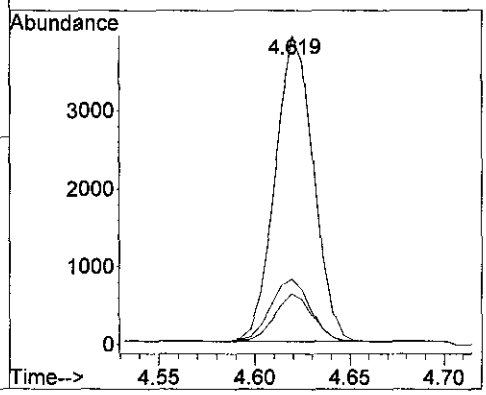


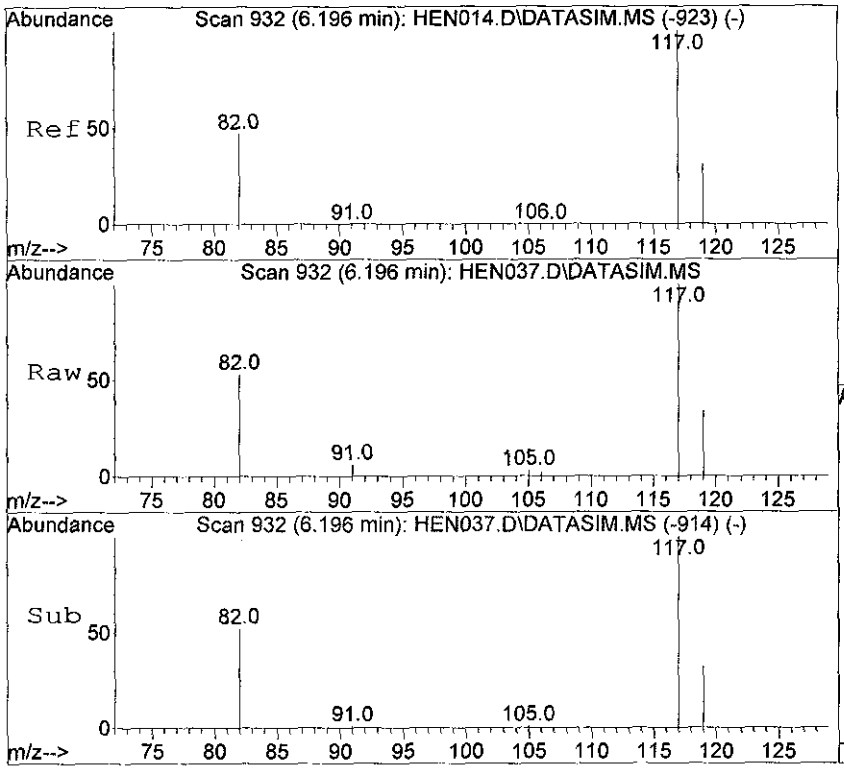


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN037.D
Acq: 21 Mar 2012 19:19

Tgt Ion:114 Resp: 5486

Ion	Ratio	Lower	Upper
114	100		
63	20.6	16.7	25.1
88	15.3	12.2	18.2

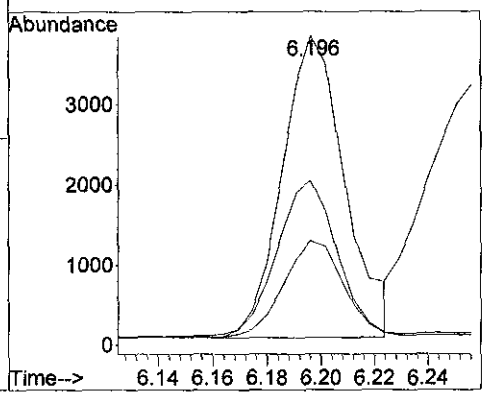




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. -0.000 min
Lab File: HEN037.D
Acq: 21 Mar 2012 19:19

Tgt Ion:117 Resp: 6137

Ion	Ratio	Lower	Upper
117	100		
82	49.8	41.4	62.0
119	30.7	25.8	38.6



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN038.D
Acq On : 21 Mar 2012 19:31
Operator : SJT
Sample : 51115 \ BLDG 3-SS-1-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 19:59:31 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

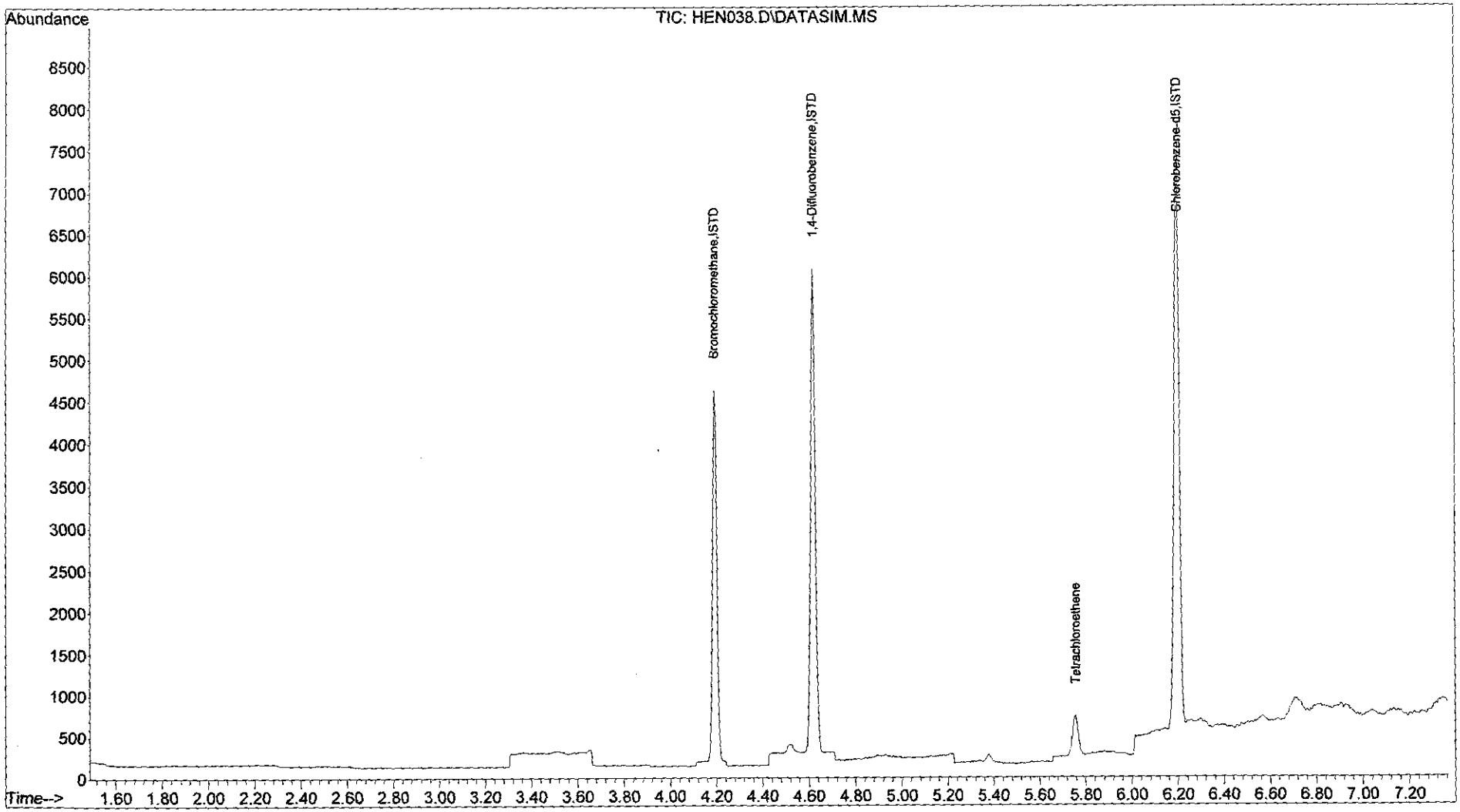
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.192	49	2387	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5558	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.197	117	5784m	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
14) Tetrachloroethene	5.757	166	278m	1.46 ppbv	

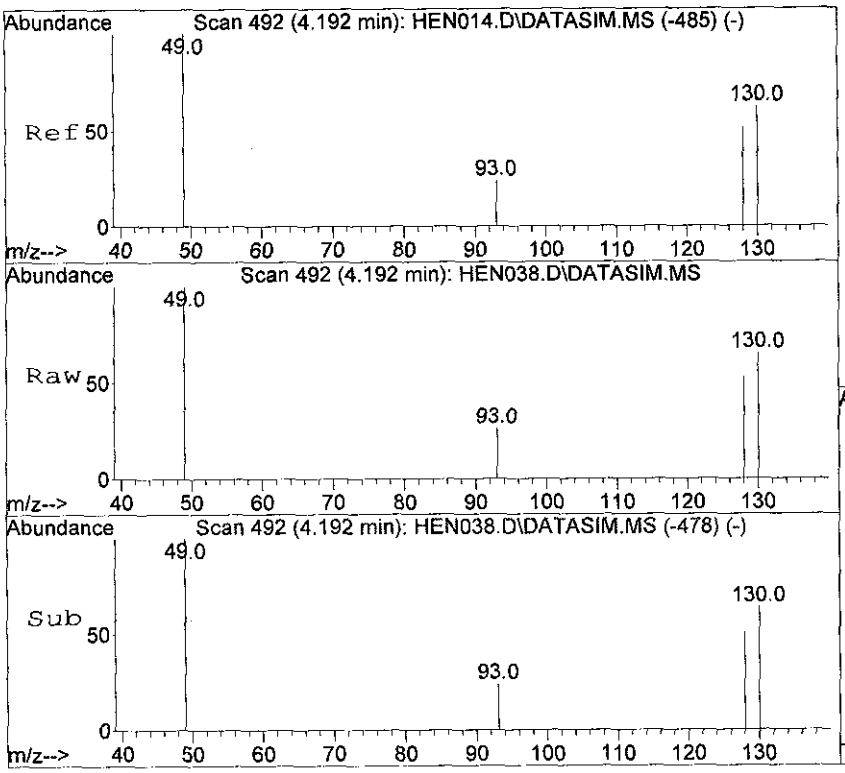
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN038.D
Acq On : 21 Mar 2012 19:31
Operator : SJT
Sample : 51115 \ BLDG 3-SS-1-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 19:59:31 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

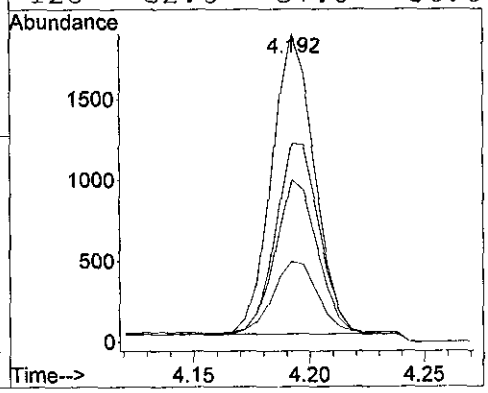


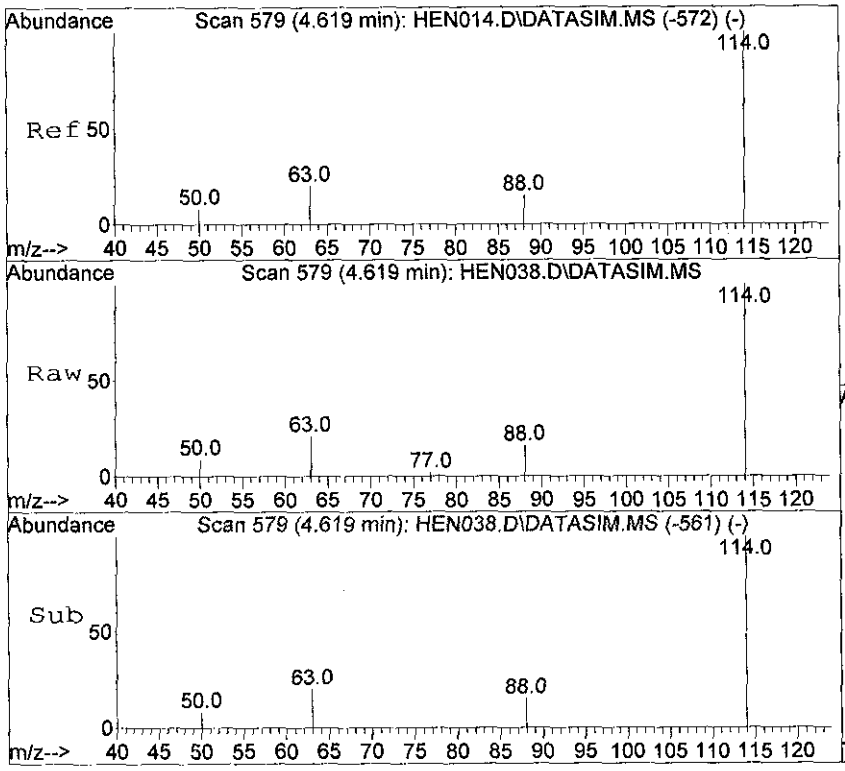


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN038.D
Acq: 21 Mar 2012 19:31

Tgt Ion: 49 Resp: 2387

Ion	Ratio	Lower	Upper
49	100		
130	64.5	46.5	69.7
93	26.2	19.0	28.6
128	52.6	37.8	56.6

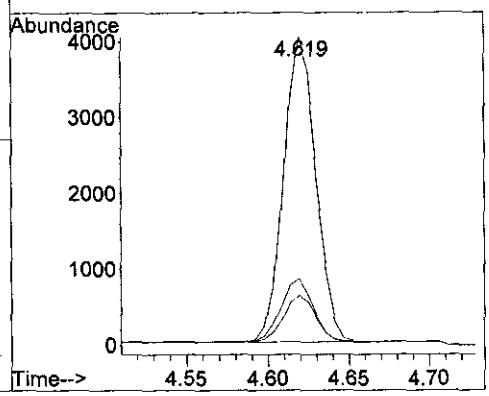


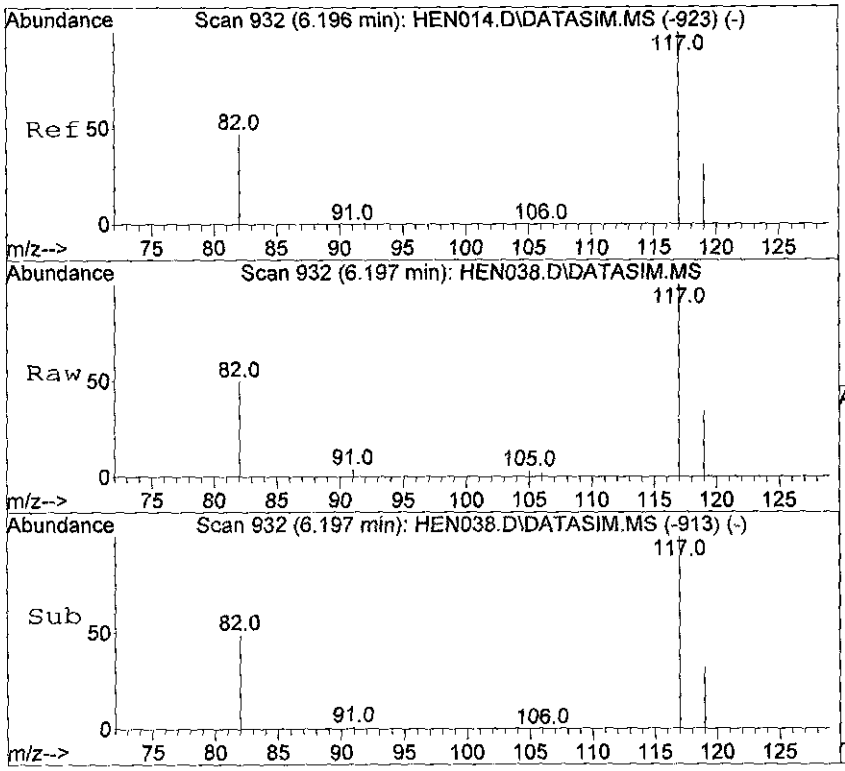


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN038.D
Acq: 21 Mar 2012 19:31

Tgt Ion:114 Resp: 5558

Ion	Ratio	Lower	Upper
114	100		
63	20.4	16.7	25.1
88	15.1	12.2	18.2

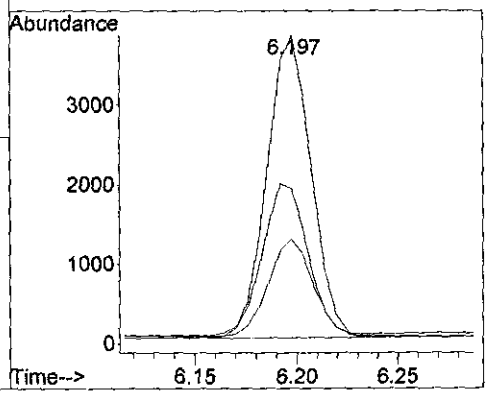


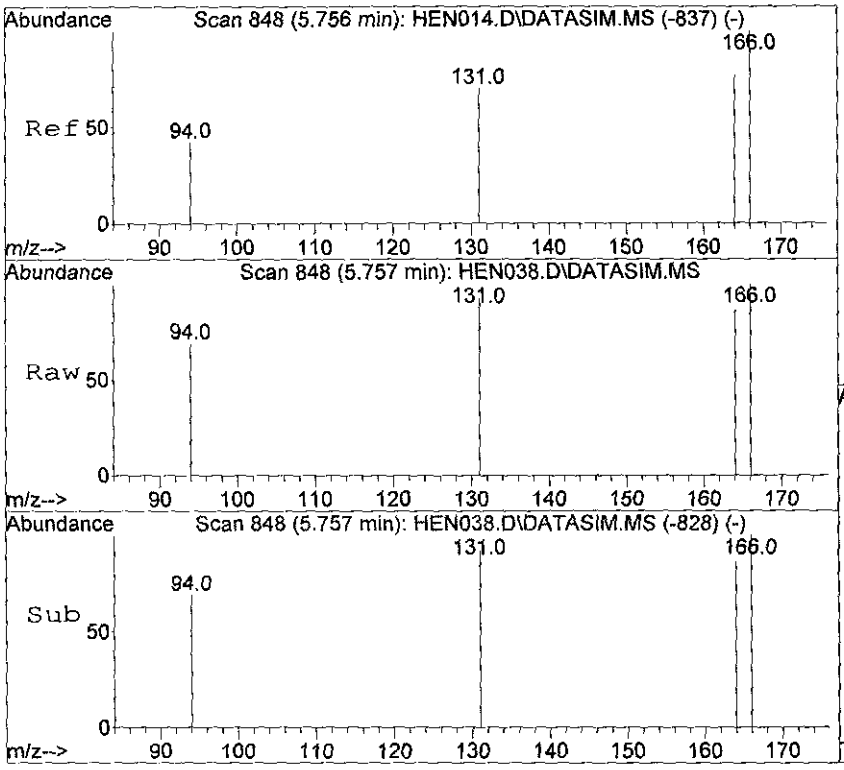


#12
Chlorobenzene-d5
Concen: 10.00 ppbv m
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN038.D
Acq: 21 Mar 2012 19:31

Tgt Ion:117 Resp: 5784

Ion	Ratio	Lower	Upper
117	100		
82	51.6	41.4	62.0
119	32.7	25.8	38.6

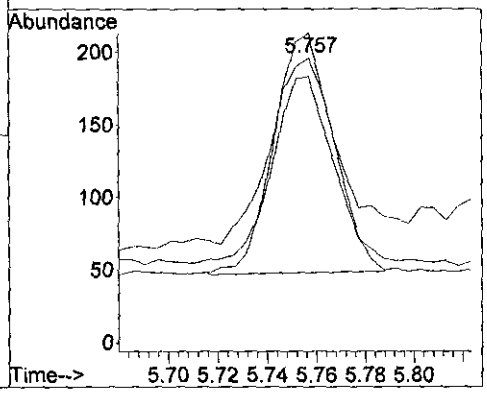




#14
Tetrachloroethene
Concen: 1.46 ppbv m
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN038.D
Acq: 21 Mar 2012 19:31

Tgt Ion:166 Resp: 278

Ion	Ratio	Lower	Upper
166	100		
164	86.3	62.5	93.7
131	90.6	57.0	85.4#



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN039.D
Acq On : 21 Mar 2012 19:42
Operator : SJT
Sample : 51116 \ BLDG 3-SS-2-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:00:04 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.192	49	2333	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5282	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.198	117	5554m	10.00	ppbv	0.00

System Monitoring Compounds

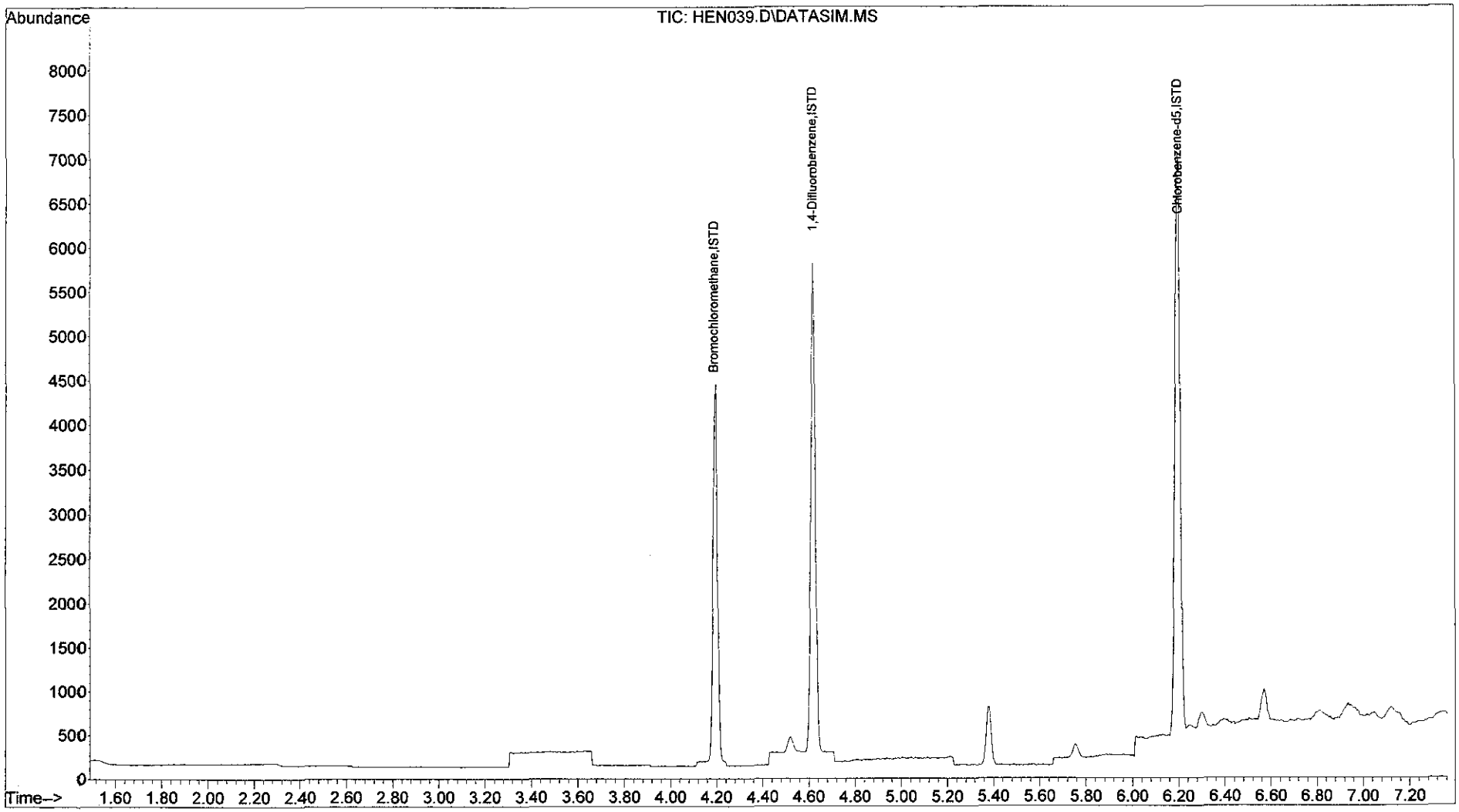
Target Compounds	Qvalue

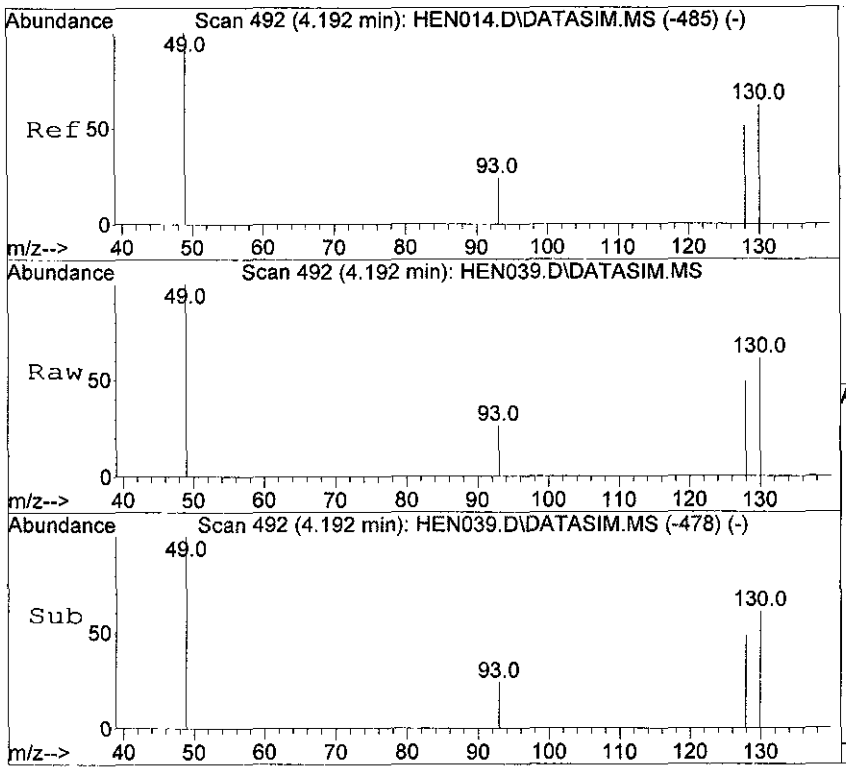
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN039.D
Acq On : 21 Mar 2012 19:42
Operator : SJT
Sample : 51116 \ BLDG 3-SS-2-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:00:04 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

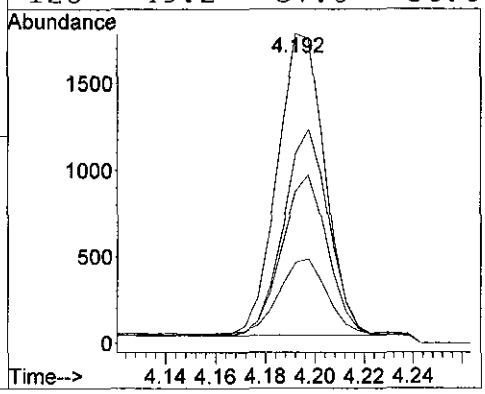


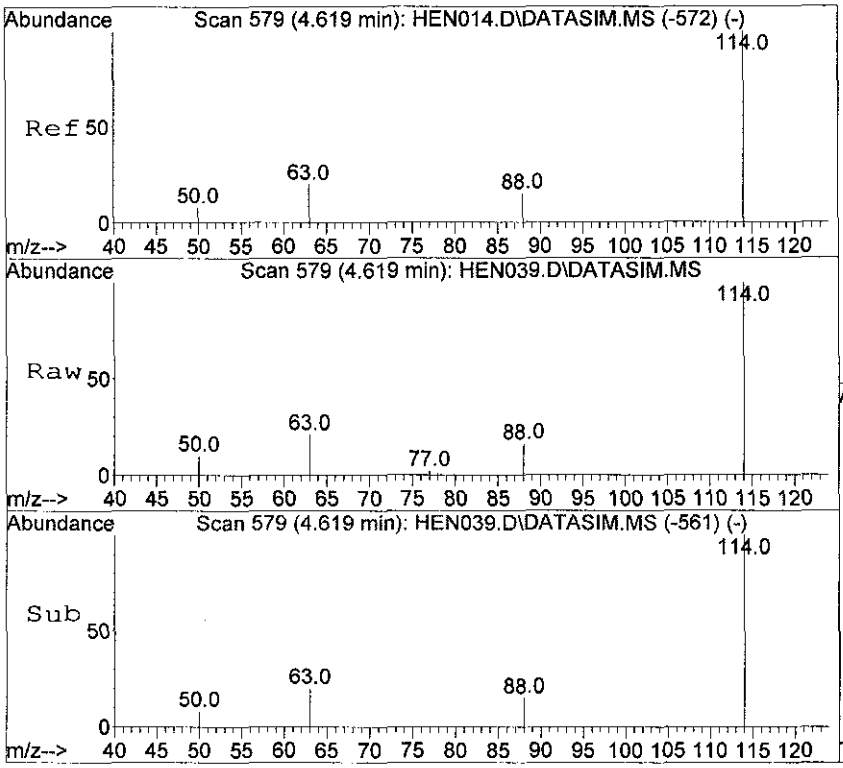


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN039.D
Acq: 21 Mar 2012 19:42

Tgt Ion: 49 Resp: 2333

Ion	Ratio	Lower	Upper
49	100		
130	61.5	46.5	69.7
93	26.1	19.0	28.6
128	49.2	37.8	56.6

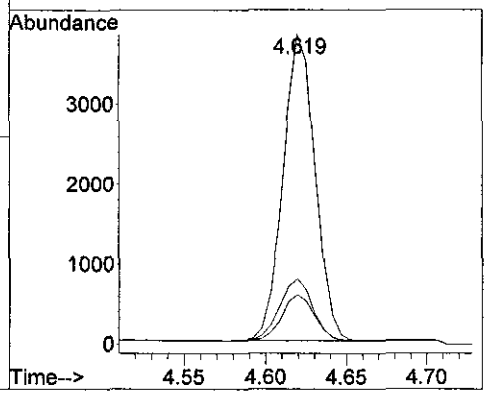


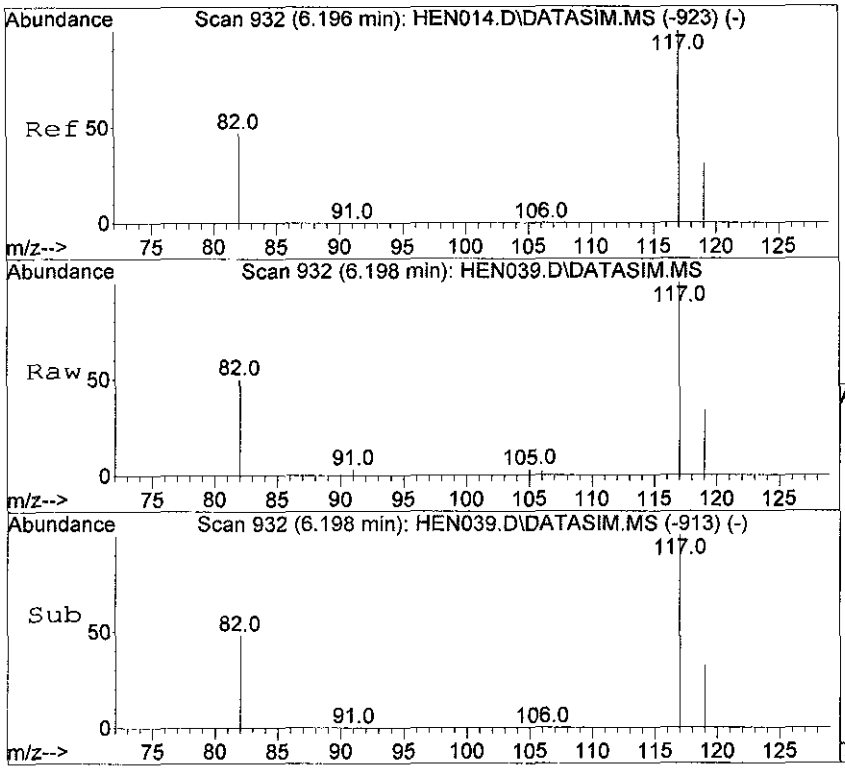


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN039.D
Acq: 21 Mar 2012 19:42

Tgt Ion:114 Resp: 5282

Ion	Ratio	Lower	Upper
114	100		
63	20.5	16.7	25.1
88	15.1	12.2	18.2

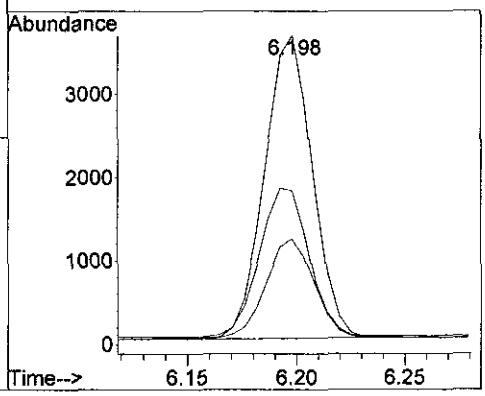




#12
Chlorobenzene-d5
Concen: 10.00 ppbv m
RT: 6.198 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN039.D
Acq: 21 Mar 2012 19:42

Tgt Ion:117 Resp: 5554

Ion	Ratio	Lower	Upper
117	100		
82	51.4	41.4	62.0
119	32.9	25.8	38.6



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN040.D
Acq On : 21 Mar 2012 19:54
Operator : SJT
Sample : 51117 \ BLDG 3-SS-2-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:01:08 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.192	49	2351	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5407	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.197	117	5719m	10.00 ppbv	0.00

System Monitoring Compounds

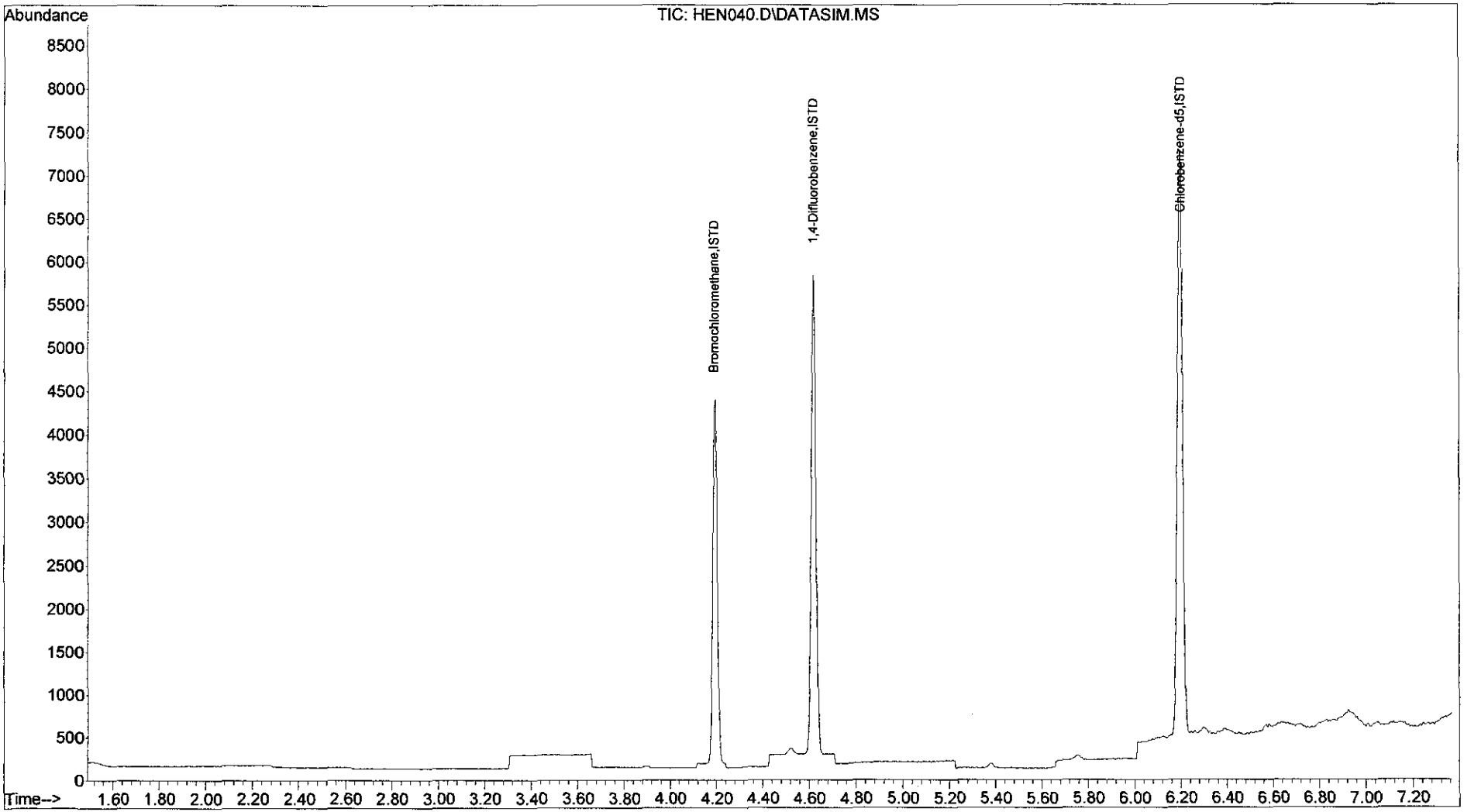
Target Compounds	Qvalue

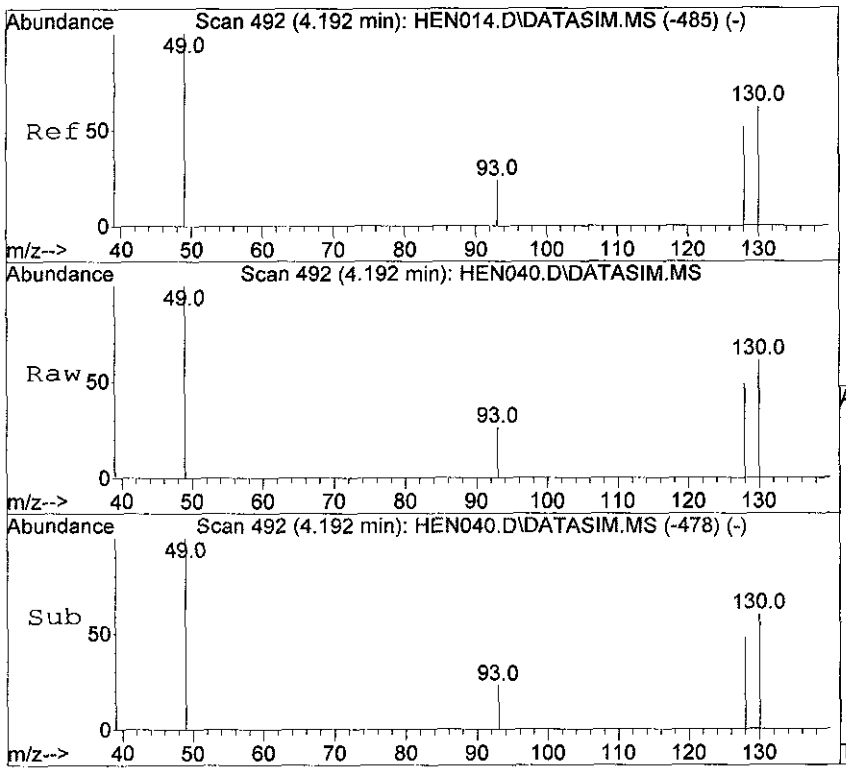
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN040.D
Acq On : 21 Mar 2012 19:54
Operator : SJT
Sample : 51117 \ BLDG 3-SS-2-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:01:08 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

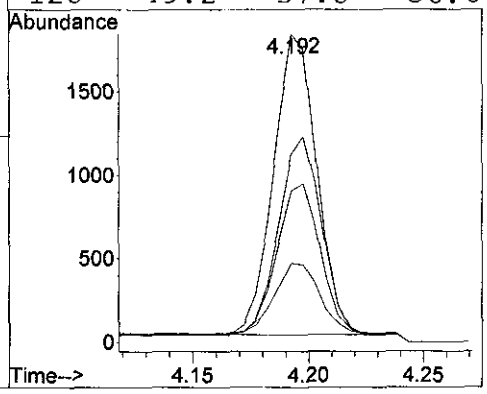


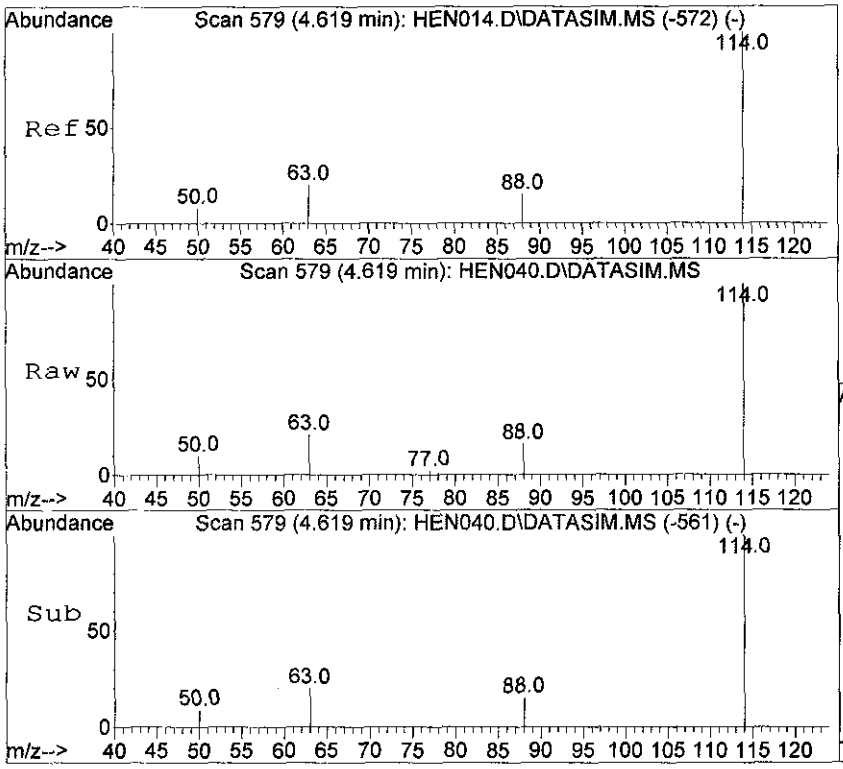


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN040.D
Acq: 21 Mar 2012 19:54

Tgt Ion: 49 Resp: 2351

Ion	Ratio	Lower	Upper
49	100		
130	61.0	46.5	69.7
93	25.8	19.0	28.6
128	49.2	37.8	56.6

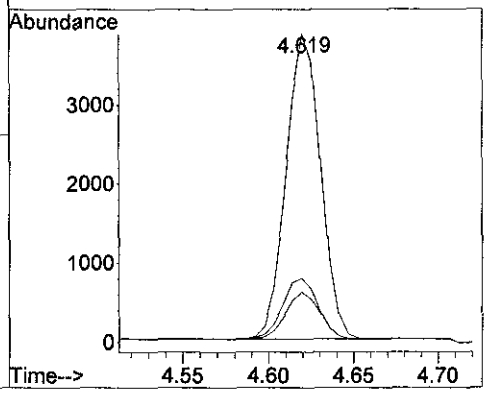


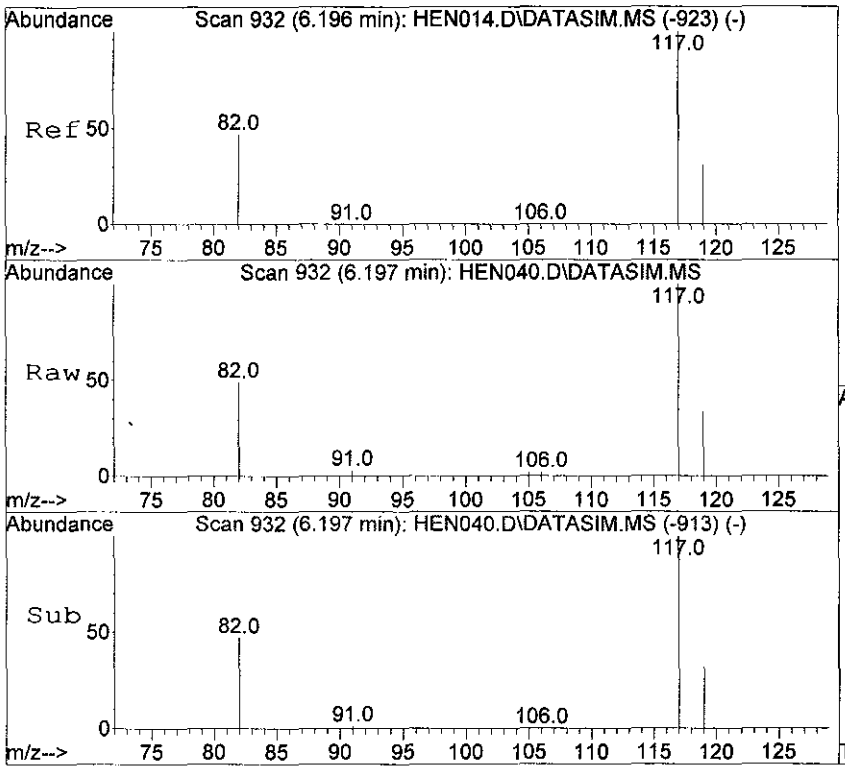


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN040.D
Acq: 21 Mar 2012 19:54

Tgt Ion:114 Resp: 5407

Ion	Ratio	Lower	Upper
114	100		
63	20.1	16.7	25.1
88	15.2	12.2	18.2

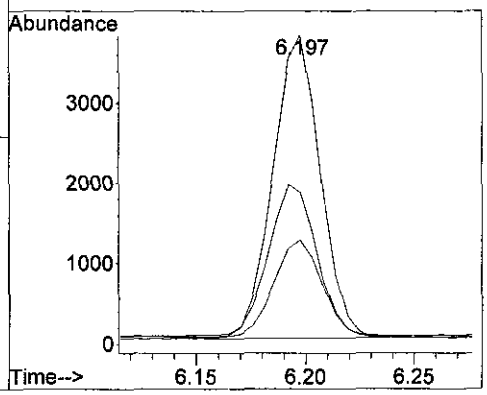




#12
Chlorobenzene-d5
Concen: 10.00 ppbv m
RT: 6.197 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN040.D
Acq: 21 Mar 2012 19:54

Tgt Ion:117 Resp: 5719

Ion	Ratio	Lower	Upper
117	100		
82	51.5	41.4	62.0
119	33.5	25.8	38.6



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN041.D
Acq On : 21 Mar 2012 20:05
Operator : SJT
Sample : 51118 \ BLDG 3-SS-2-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:14:28 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.192	49	2366	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5414	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.198	117	5619m	10.00 ppbv	0.00

System Monitoring Compounds

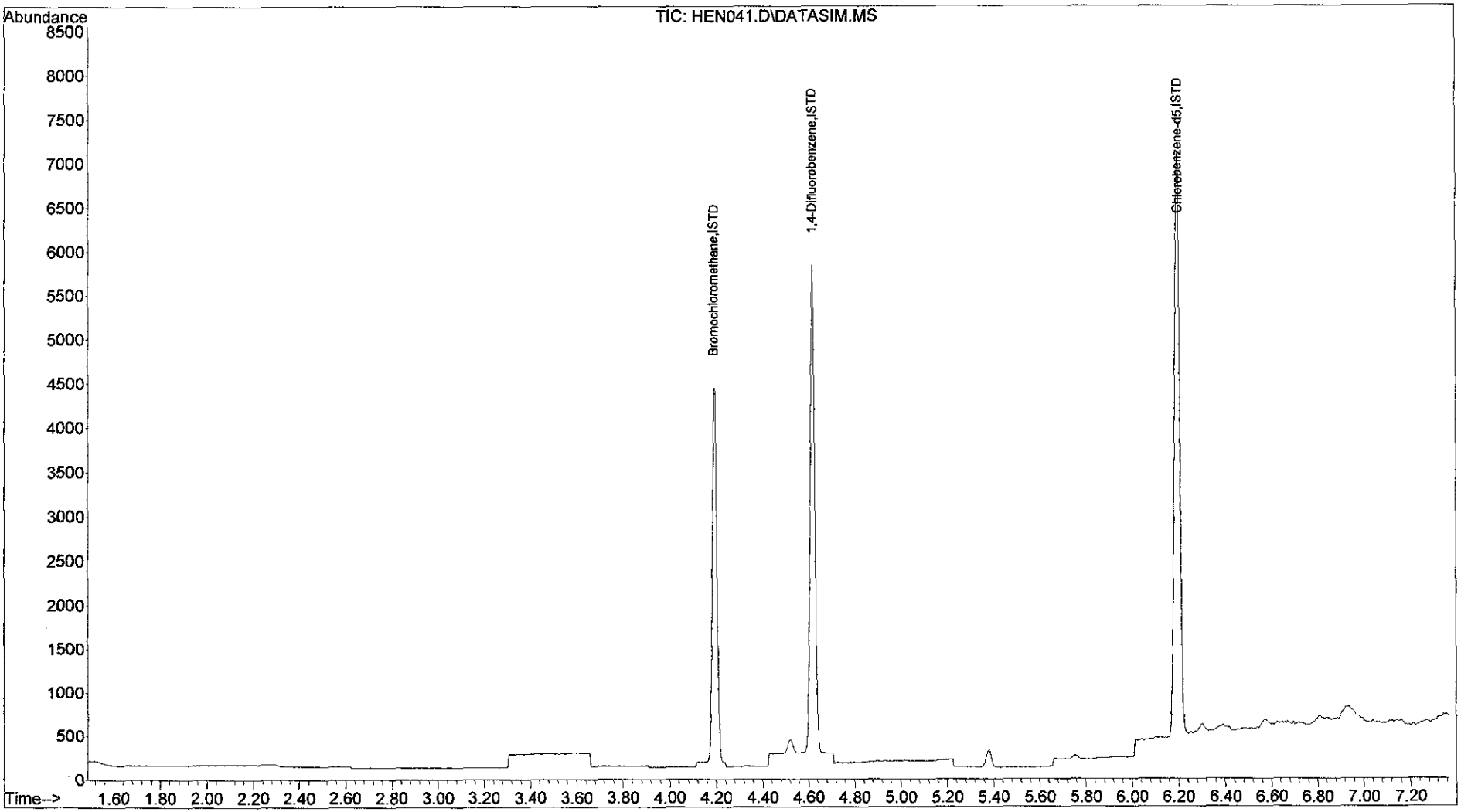
Target Compounds	Qvalue

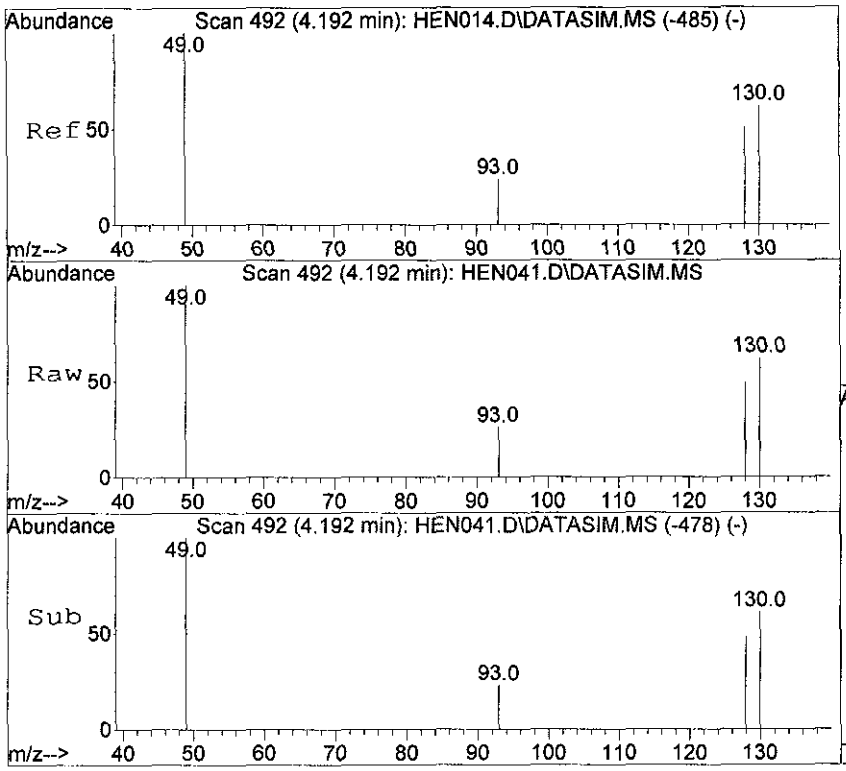
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN041.D
Acq On : 21 Mar 2012 20:05
Operator : SJT
Sample : 51118 \ BLDG 3-SS-2-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:14:28 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

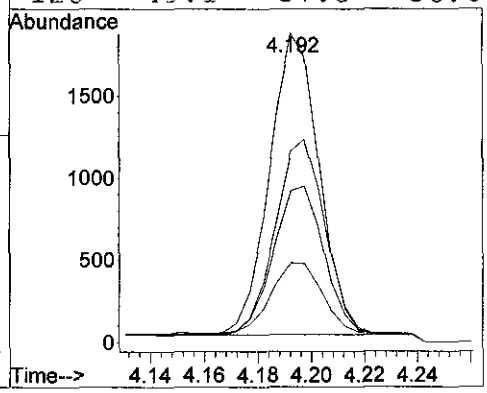


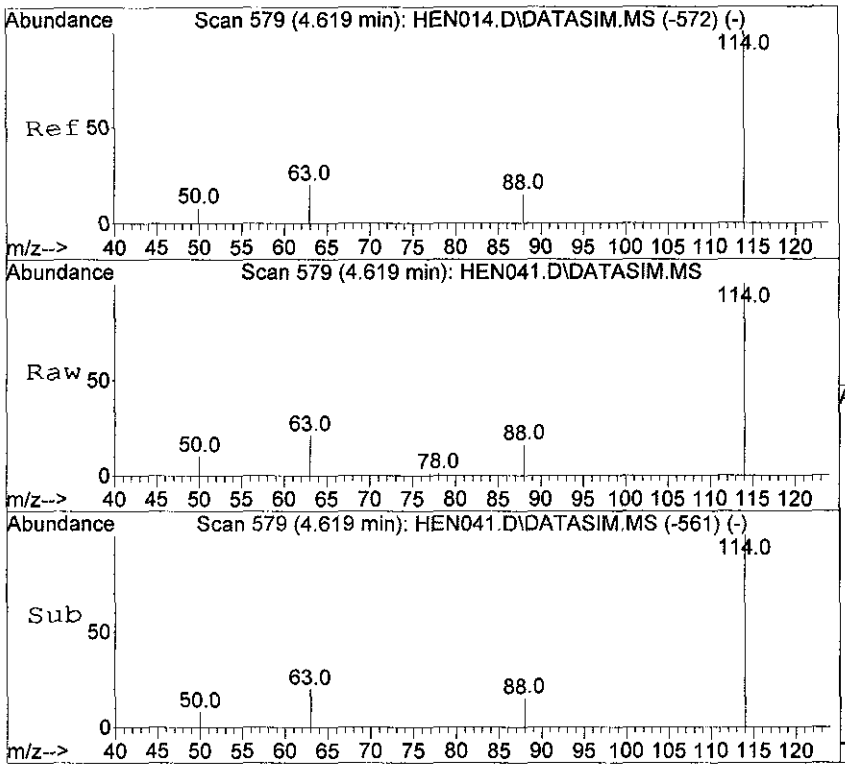


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN041.D
Acq: 21 Mar 2012 20:05

Tgt Ion: 49 Resp: 2366

Ion	Ratio	Lower	Upper
49	100		
130	61.8	46.5	69.7
93	25.6	19.0	28.6
128	49.1	37.8	56.6

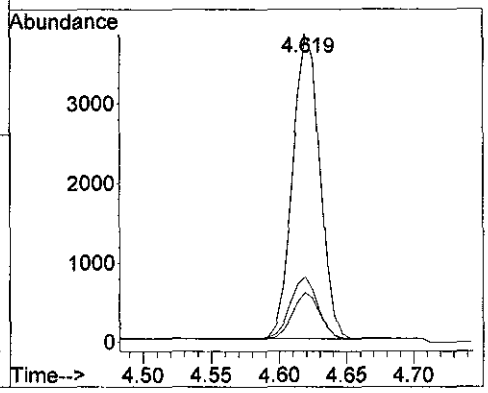


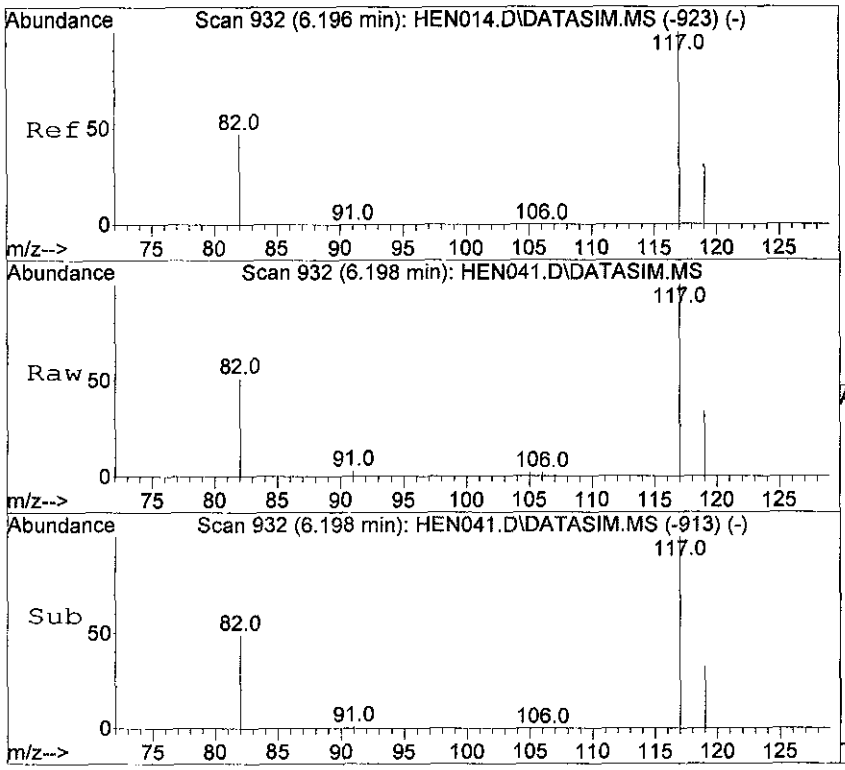


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN041.D
Acq: 21 Mar 2012 20:05

Tgt Ion:114 Resp: 5414

Ion	Ratio	Lower	Upper
114	100		
63	20.3	16.7	25.1
88	15.1	12.2	18.2

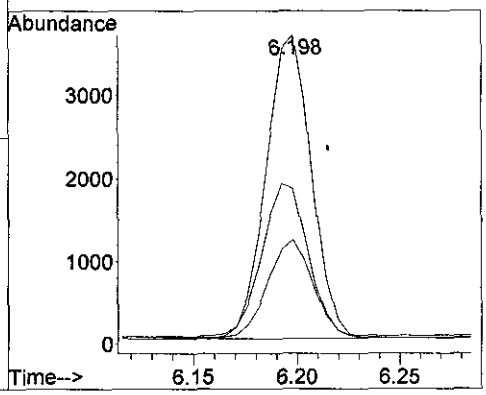




#12
Chlorobenzene-d5
Concen: 10.00 ppbv m
RT: 6.198 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN041.D
Acq: 21 Mar 2012 20:05

Tgt Ion:117 Resp: 5619

Ion	Ratio	Lower	Upper
117	100		
82	51.7	41.4	62.0
119	32.7	25.8	38.6



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN042.D
Acq On : 21 Mar 2012 20:18
Operator : SJT
Sample : 51119 \ BLDG 3-SS-2-04
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:24:33 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.192	49	2381	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.619	114	5517	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	5721	10.00	ppbv	0.00

System Monitoring Compounds

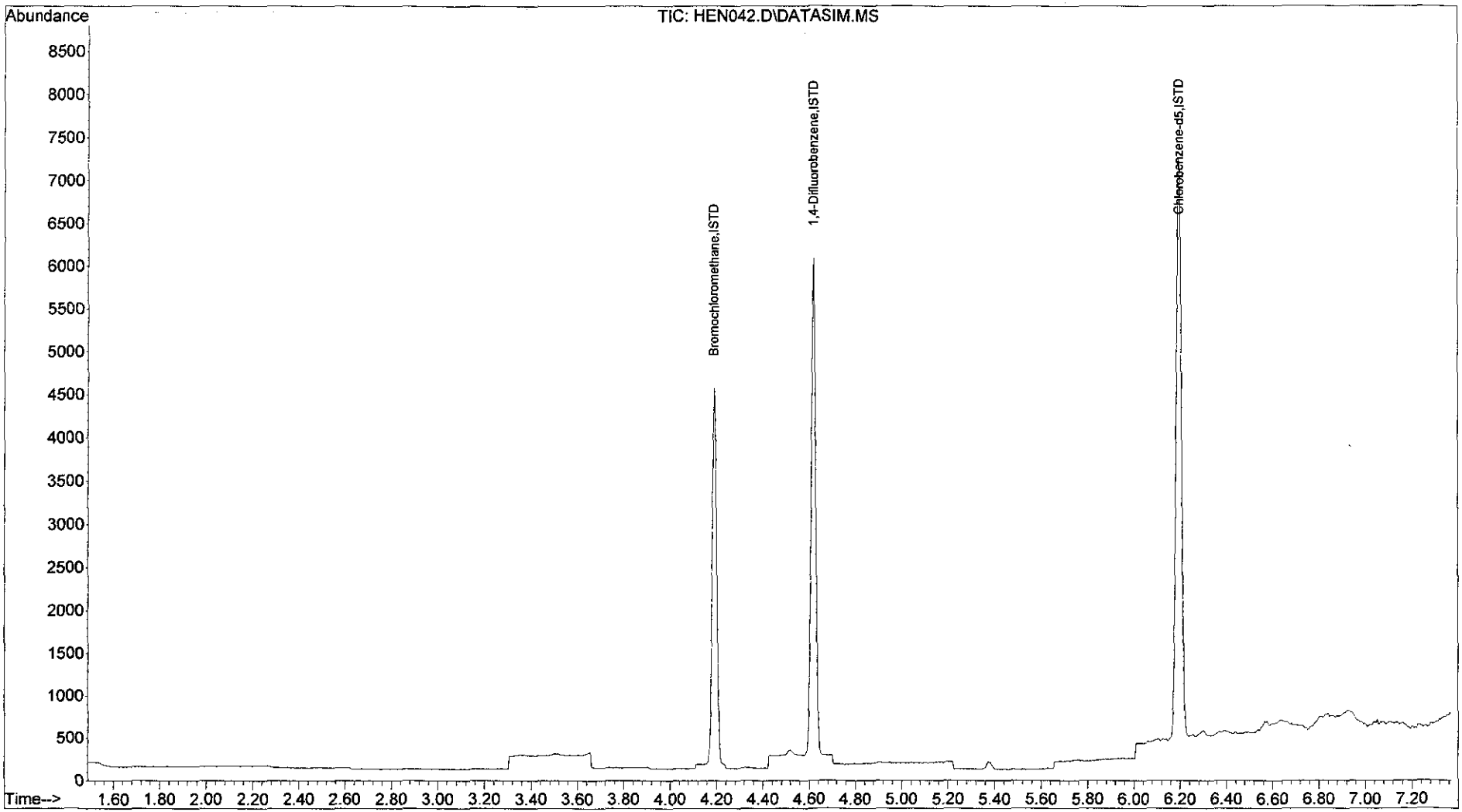
Target Compounds	Qvalue

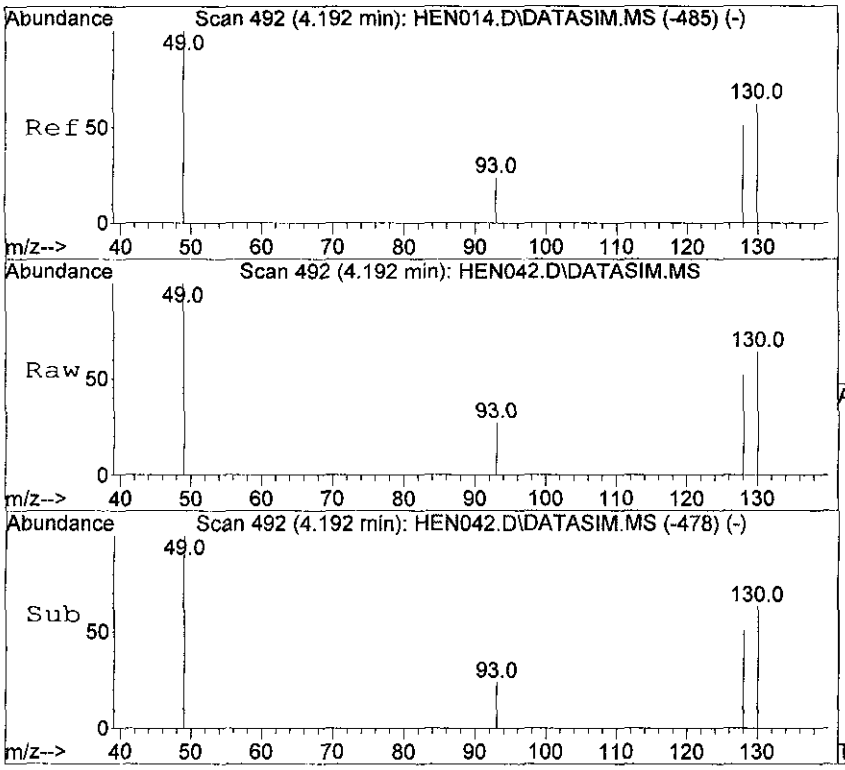
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN042.D
Acq On : 21 Mar 2012 20:18
Operator : SJT
Sample : 51119 \ BLDG 3-SS-2-04
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:24:33 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

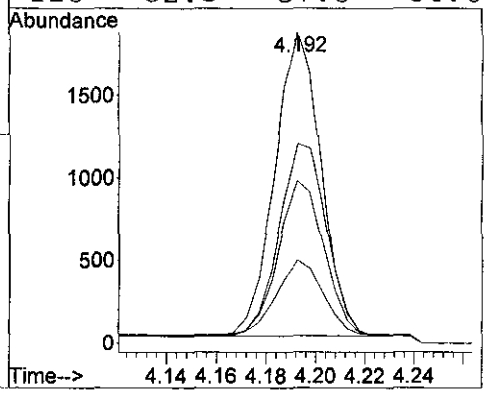


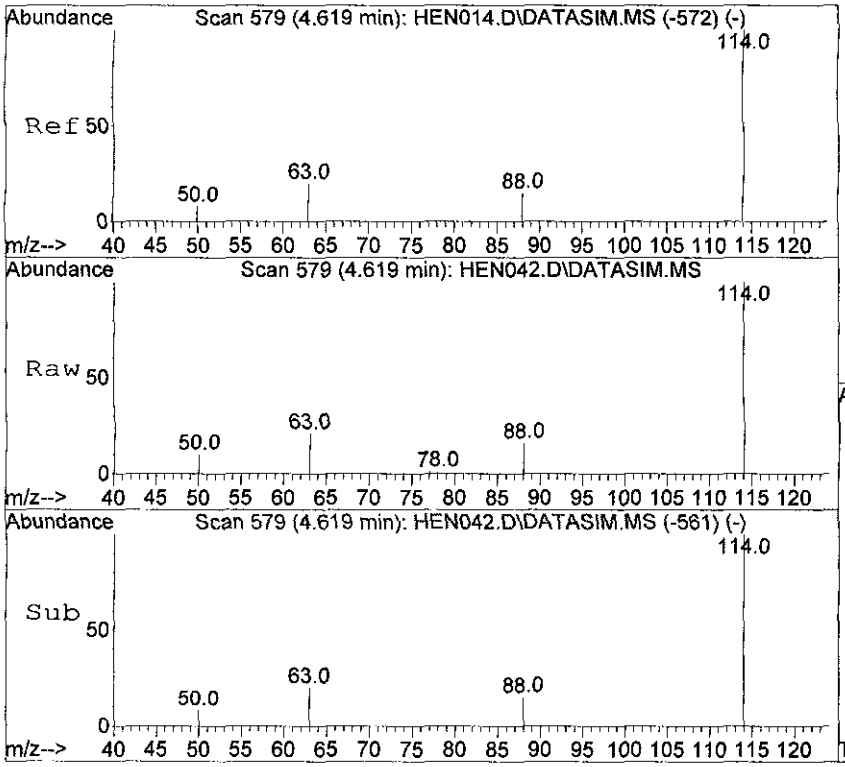


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. -0.000 min
Lab File: HEN042.D
Acq: 21 Mar 2012 20:18

Tgt Ion: 49 Resp: 2381

Ion	Ratio	Lower	Upper
49	100		
130	64.2	46.5	69.7
93	26.7	19.0	28.6
128	52.3	37.8	56.6

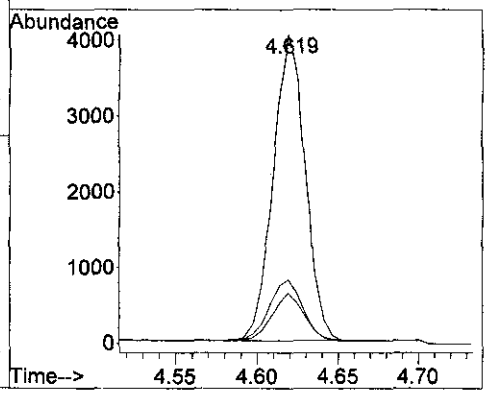


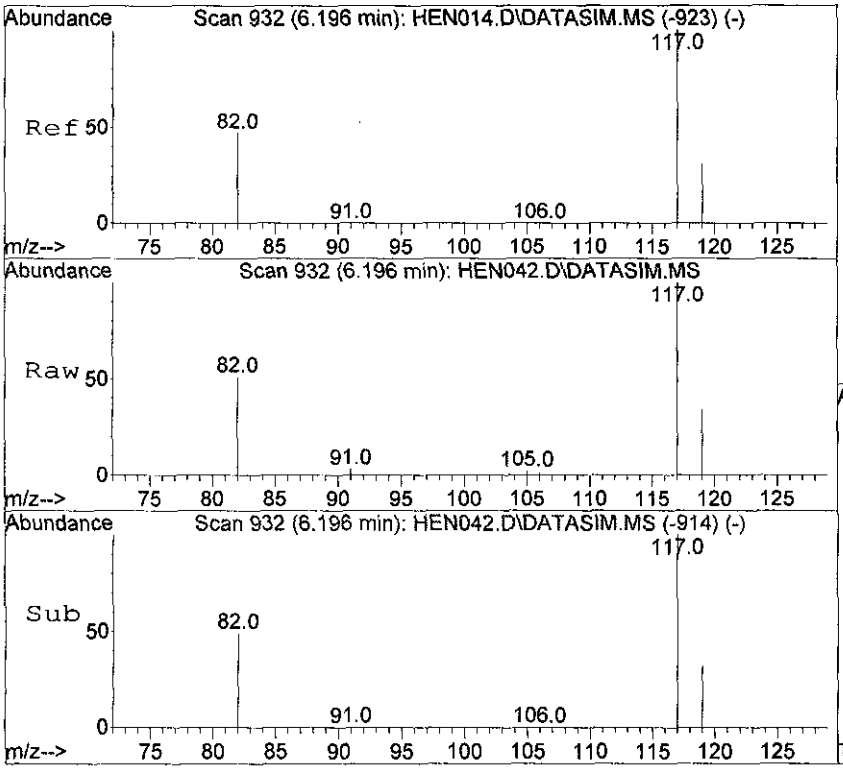


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.619 min Scan# 579
Delta R.T. -0.000 min
Lab File: HEN042.D
Acq: 21 Mar 2012 20:18

Tgt Ion:114 Resp: 5517

Ion	Ratio	Lower	Upper
114	100		
63	20.3	16.7	25.1
88	15.1	12.2	18.2

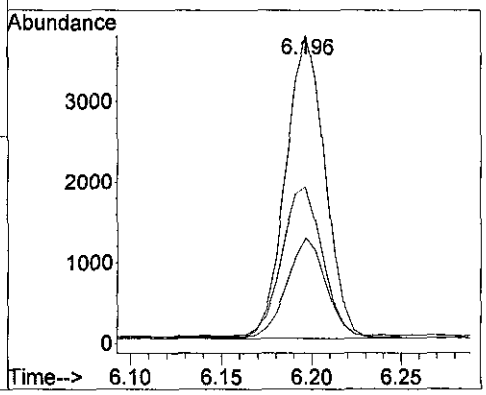




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. -0.000 min
Lab File: HEN042.D
Acq: 21 Mar 2012 20:18

Tgt Ion:117 Resp: 5721

Ion	Ratio	Lower	Upper
117	100		
82	50.7	41.4	62.0
119	33.1	25.8	38.6



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN043.D
Acq On : 21 Mar 2012 20:29
Operator : SJT
Sample : 51120 \ BLDG P2-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:38:22 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

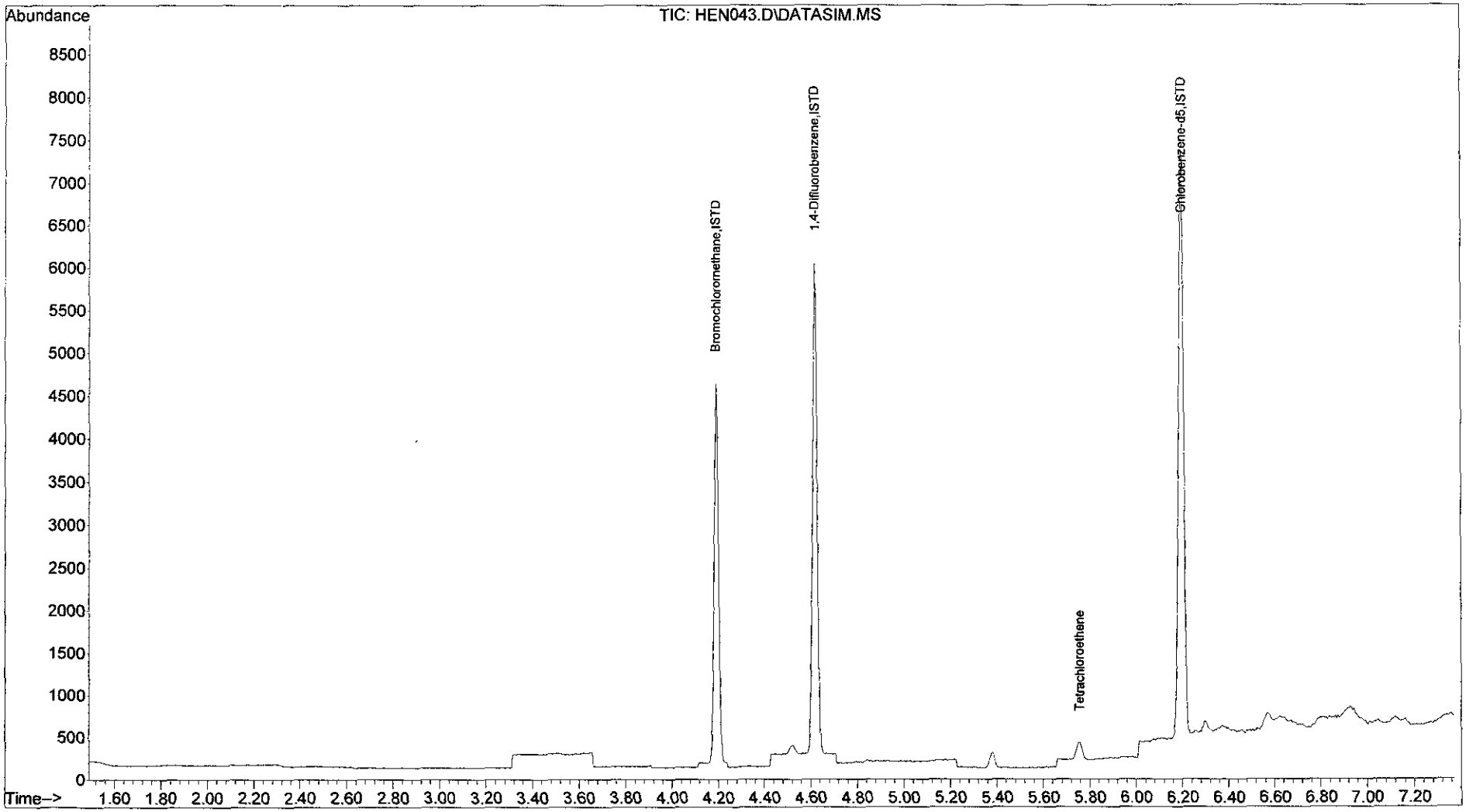
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.191	49	2403	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.618	114	5536	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.196	117	5769	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
14) Tetrachloroethene	5.756	166	122m	0.64	ppbv	

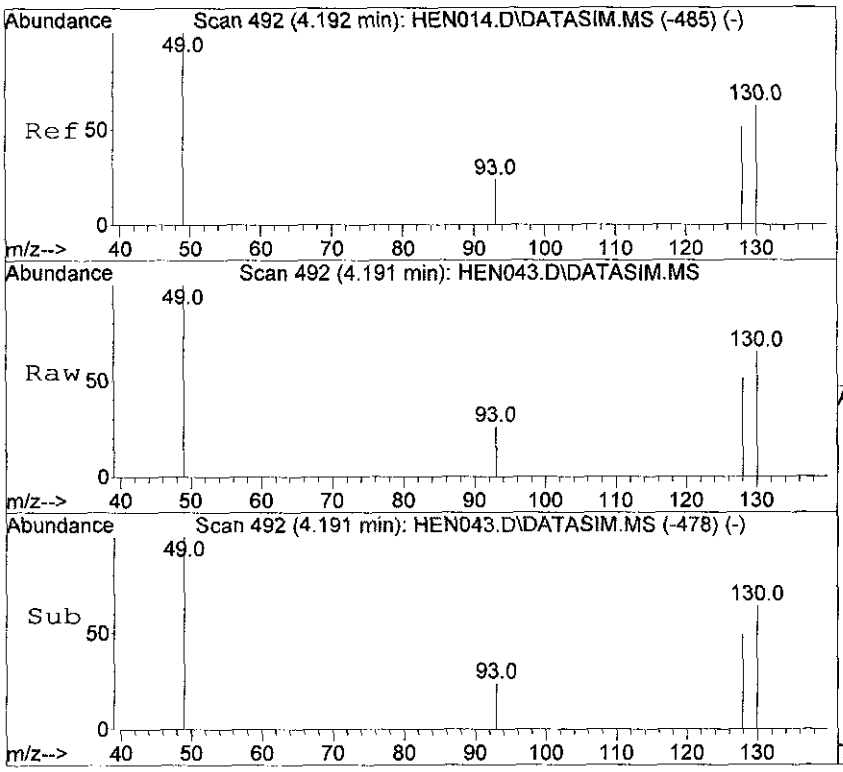
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN043.D
Acq On : 21 Mar 2012 20:29
Operator : SJT
Sample : 51120 \ BLDG P2-SS-01
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:38:22 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

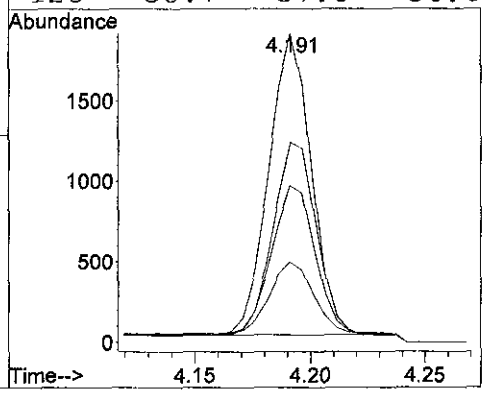


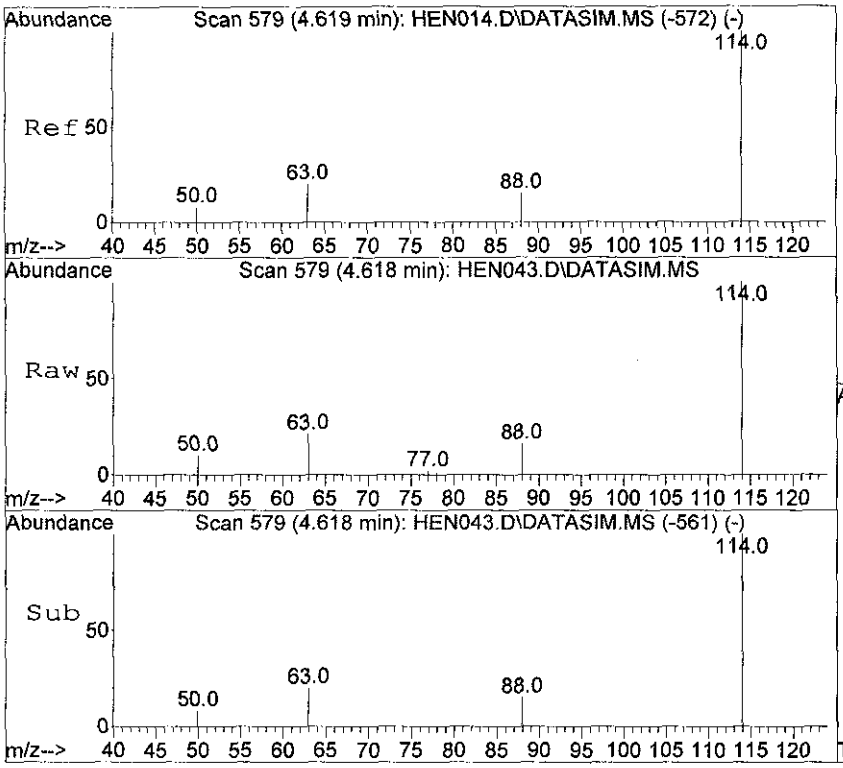


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.191 min Scan# 492
Delta R.T. -0.001 min
Lab File: HEN043.D
Acq: 21 Mar 2012 20:29

Tgt Ion: 49 Resp: 2403

Ion	Ratio	Lower	Upper
49	100		
130	64.8	46.5	69.7
93	25.9	19.0	28.6
128	50.7	37.8	56.6

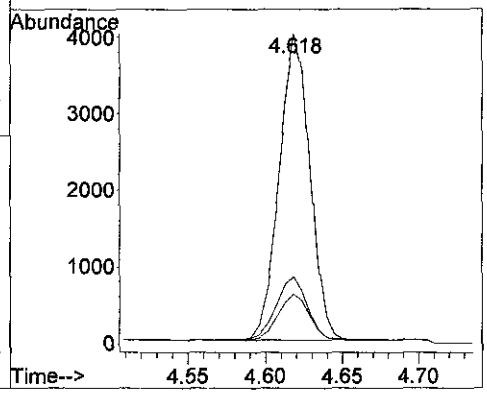


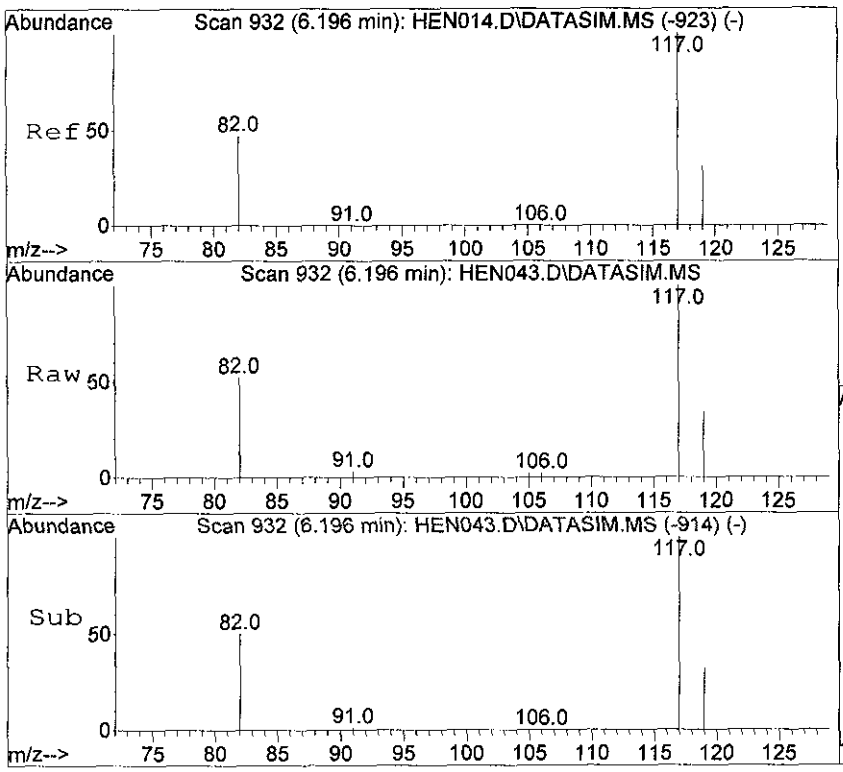


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.618 min Scan# 579
Delta R.T. -0.001 min
Lab File: HEN043.D
Acq: 21 Mar 2012 20:29

Tgt Ion:114 Resp: 5536

Ion	Ratio	Lower	Upper
114	100		
63	20.6	16.7	25.1
88	15.0	12.2	18.2

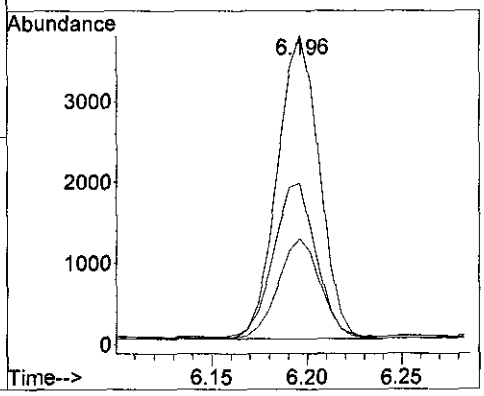


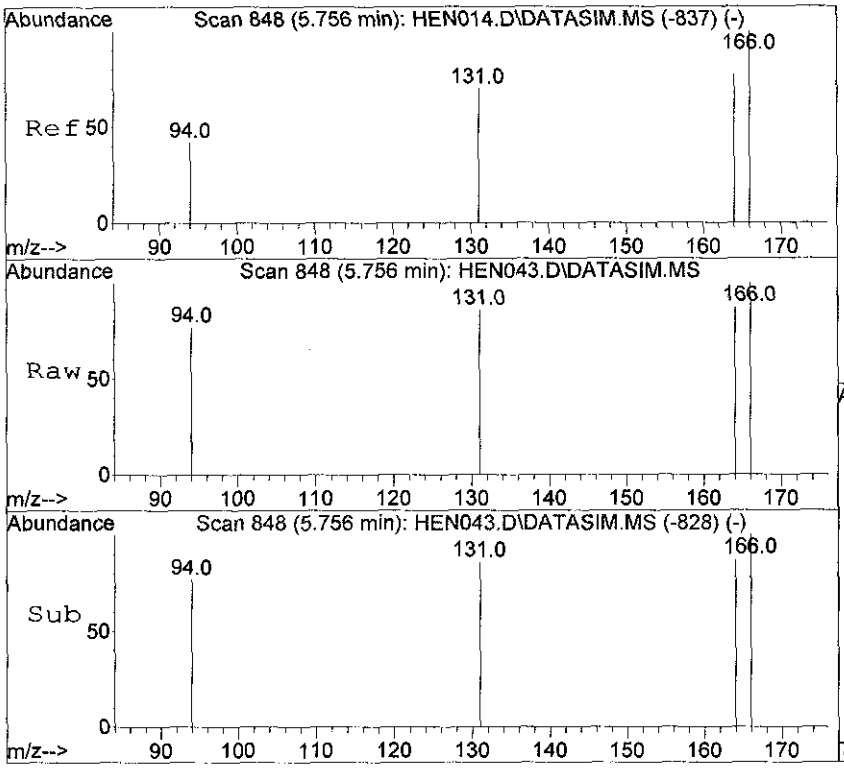


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. -0.000 min
Lab File: HEN043.D
Acq: 21 Mar 2012 20:29

Tgt Ion:117 Resp: 5769

Ion	Ratio	Lower	Upper
117	100		
82	50.4	41.4	62.0
119	32.9	25.8	38.6

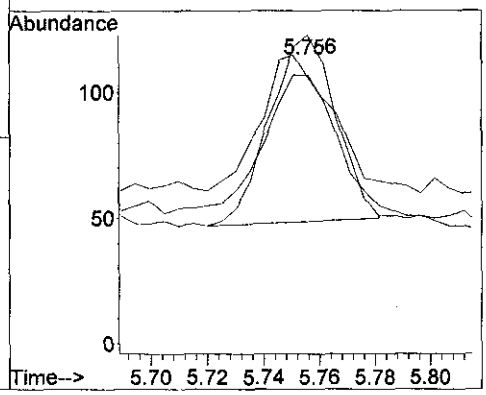




#14
Tetrachloroethene
Concen: 0.64 ppbv m
RT: 5.756 min Scan# 848
Delta R.T. -0.000 min
Lab File: HEN043.D
Acq: 21 Mar 2012 20:29

Tgt Ion:166 Resp: 122

Ion	Ratio	Lower	Upper
166	100		
164	93.4	62.5	93.7
131	82.0	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN044.D
Acq On : 21 Mar 2012 20:41
Operator : SJT
Sample : 51121 \ BLDG P2-SS-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:49:26 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

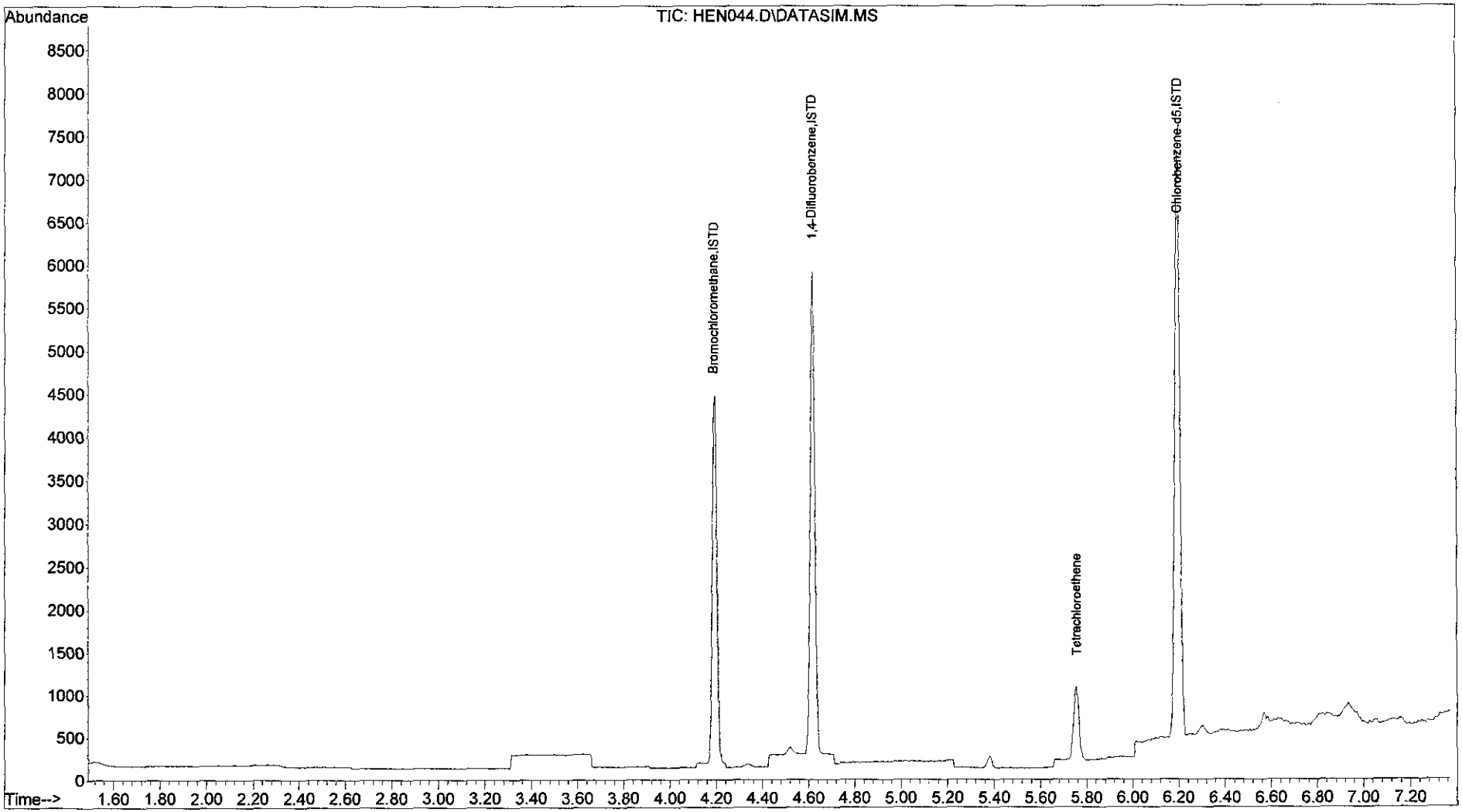
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.191	49	2372	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.618	114	5439	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.196	117	5668m	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
14) Tetrachloroethene	5.756	166	488m	2.62 ppbv	

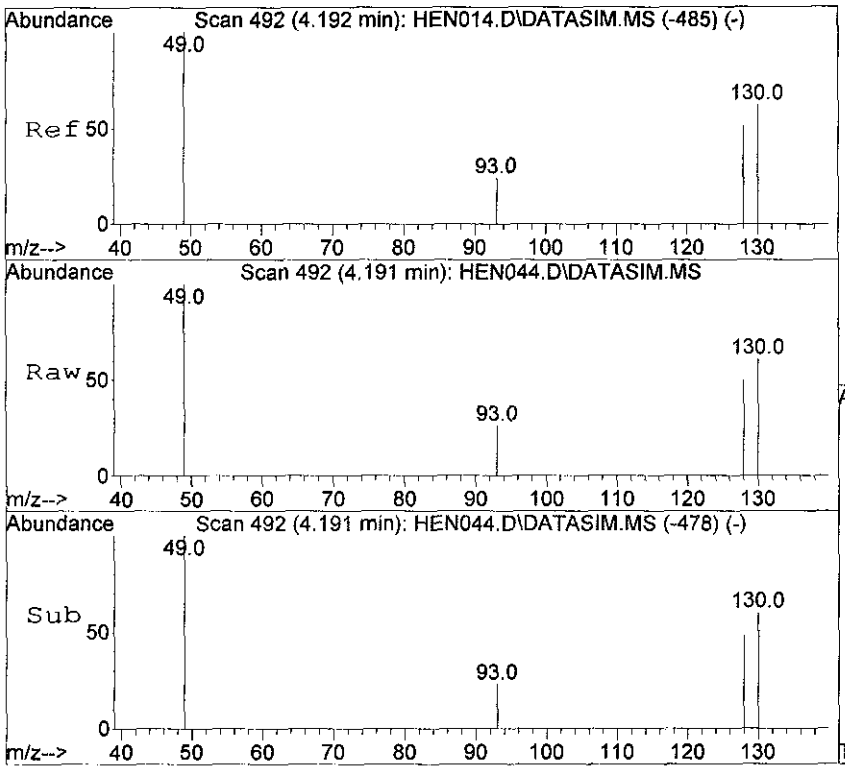
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN044.D
Acq On : 21 Mar 2012 20:41
Operator : SJT
Sample : 51121 \ BLDG P2-SS-02
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 20:49:26 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

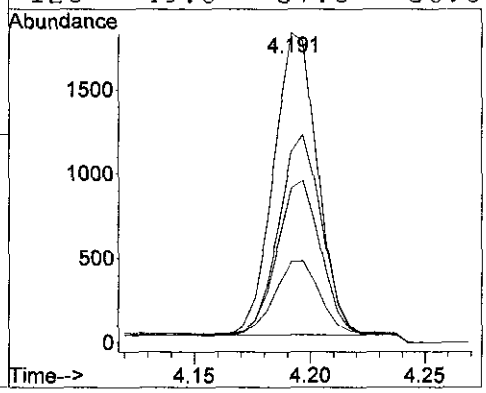


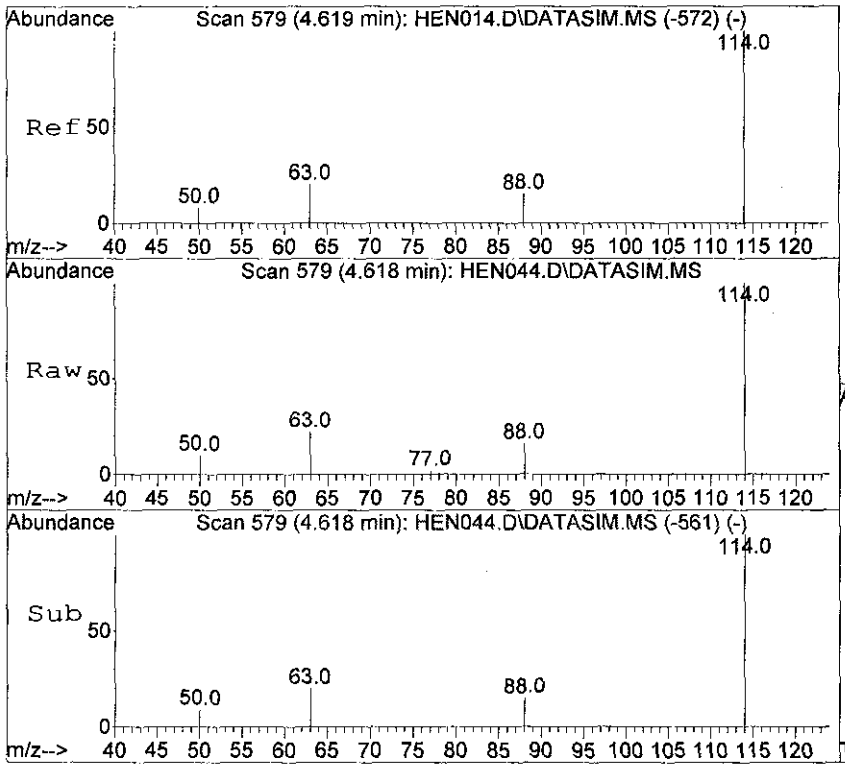


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.191 min Scan# 492
Delta R.T. -0.001 min
Lab File: HEN044.D
Acq: 21 Mar 2012 20:41

Tgt Ion: 49 Resp: 2372

Ion	Ratio	Lower	Upper
49	100		
130	61.2	46.5	69.7
93	25.9	19.0	28.6
128	49.8	37.8	56.6

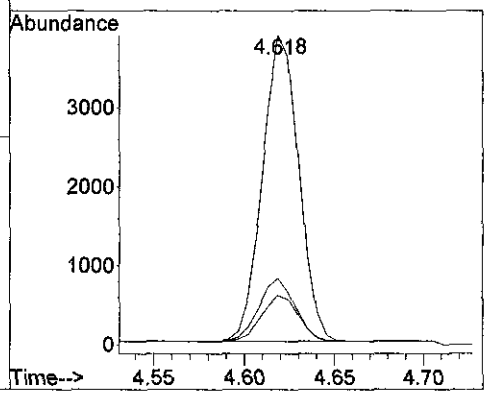


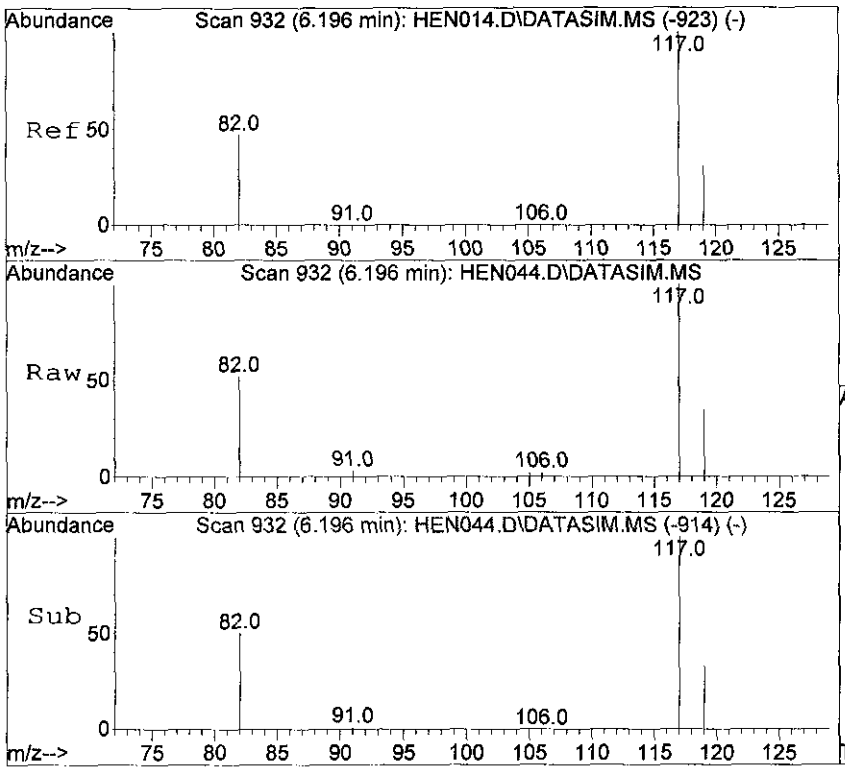


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.618 min Scan# 579
Delta R.T. -0.001 min
Lab File: HEN044.D
Acq: 21 Mar 2012 20:41

Tgt Ion:114 Resp: 5439

Ion	Ratio	Lower	Upper
114	100		
63	20.1	16.7	25.1
88	15.3	12.2	18.2

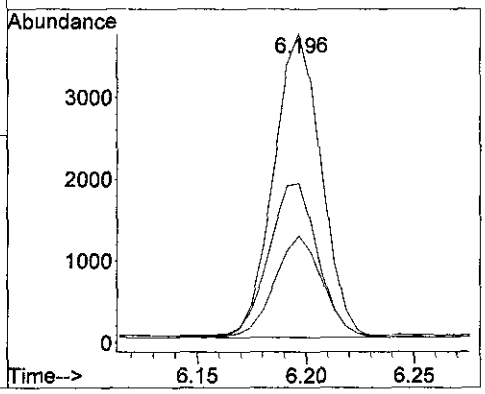


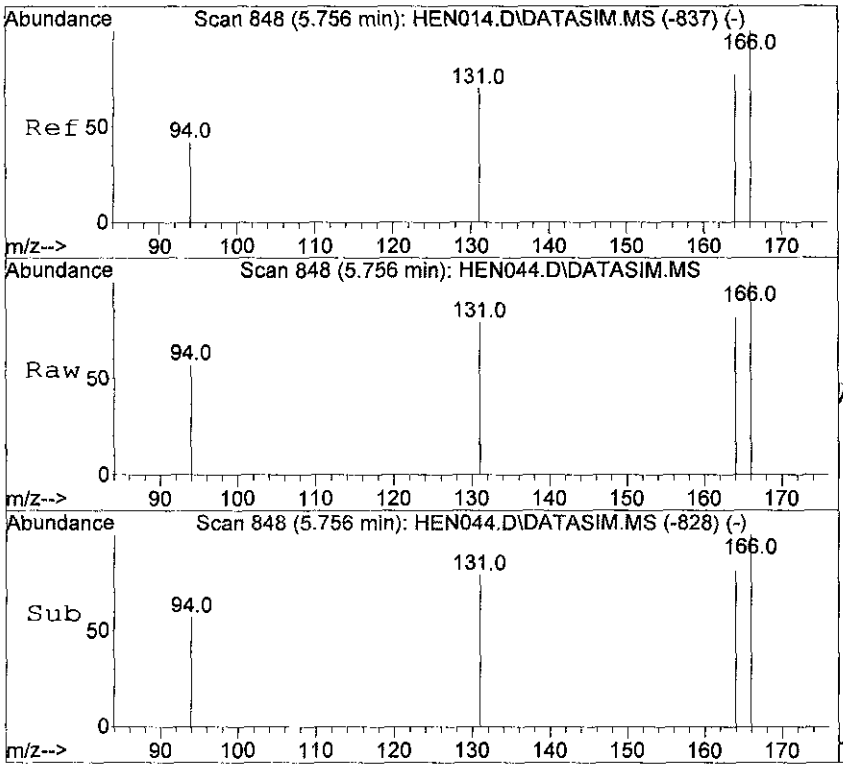


#12
Chlorobenzene-d5
Concen: 10.00 ppbv m
RT: 6.196 min Scan# 932
Delta R.T. 0.000 min
Lab File: HEN044.D
Acq: 21 Mar 2012 20:41

Tgt Ion:117 Resp: 5668

Ion	Ratio	Lower	Upper
117	100		
82	51.3	41.4	62.0
119	33.5	25.8	38.6

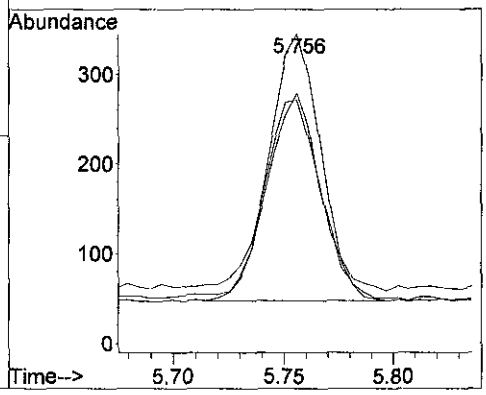




#14
Tetrachloroethene
Concen: 2.62 ppbv m
RT: 5.756 min Scan# 848
Delta R.T. 0.000 min
Lab File: HEN044.D
Acq: 21 Mar 2012 20:41

Tgt Ion:166 Resp: 488

Ion	Ratio	Lower	Upper
166	100		
164	80.3	62.5	93.7
131	74.6	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN045.D
Acq On : 21 Mar 2012 20:53
Operator : SJT
Sample : 51122 \ BLDG P2-SS-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 21:00:43 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

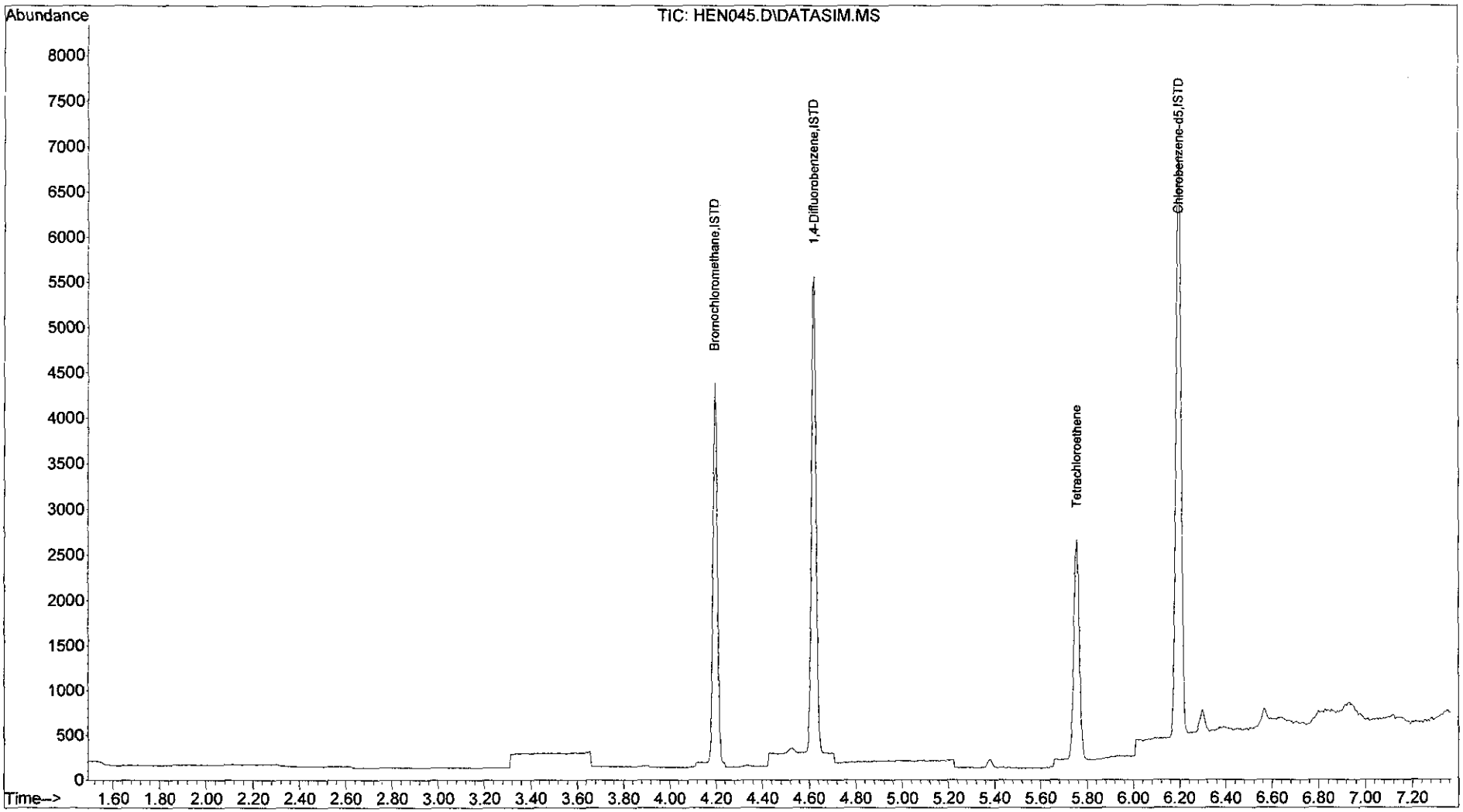
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.196	49	2263	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.624	114	5229	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.196	117	5437	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
14) Tetrachloroethene	5.756	166	1391m	7.78 ppbv	

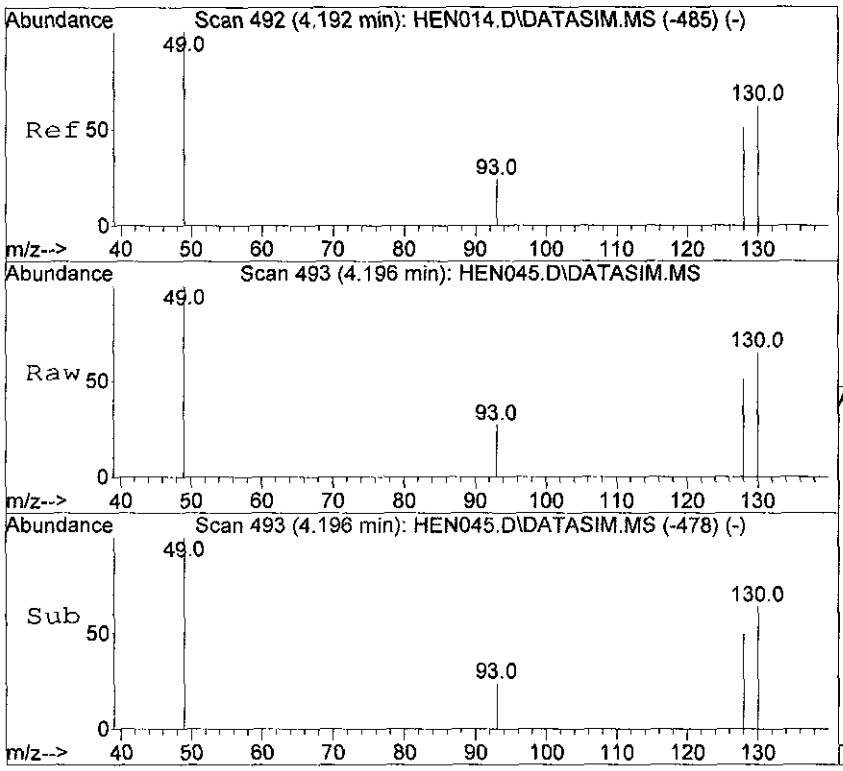
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN045.D
Acq On : 21 Mar 2012 20:53
Operator : SJT
Sample : 51122 \ BLDG P2-SS-03
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 21:00:43 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

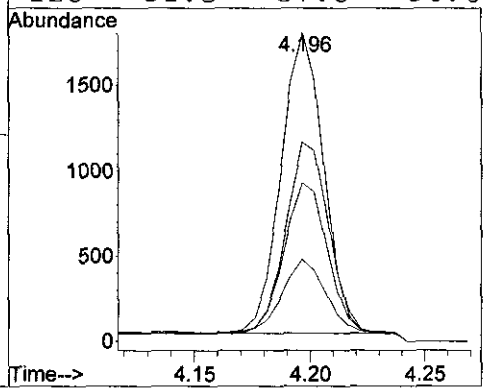


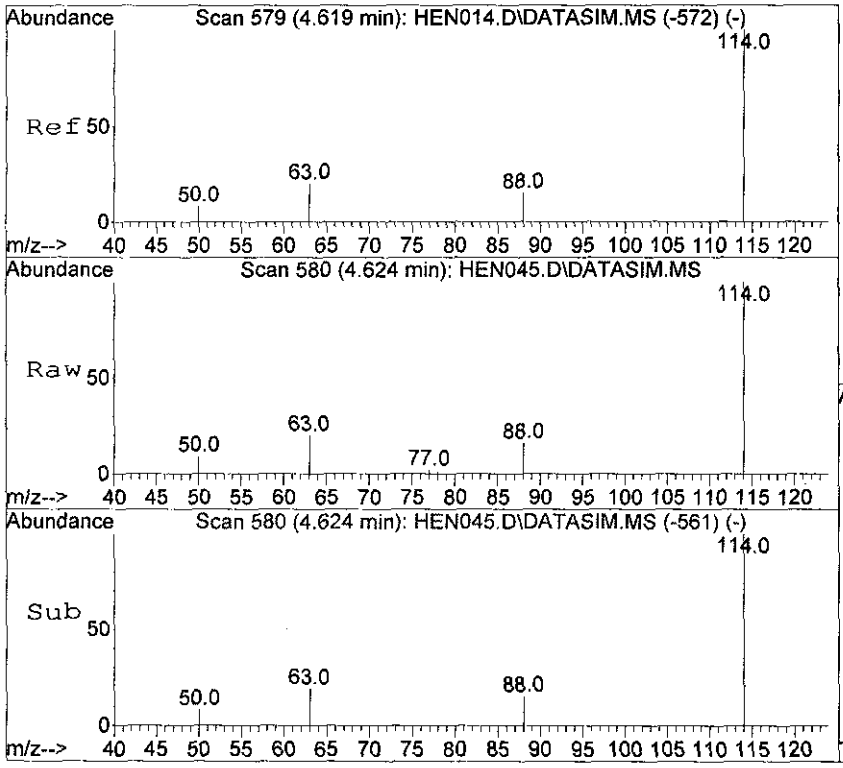


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.196 min Scan# 493
Delta R.T. 0.004 min
Lab File: HEN045.D
Acq: 21 Mar 2012 20:53

Tgt Ion: 49 Resp: 2263

Ion	Ratio	Lower	Upper
49	100		
130	64.5	46.5	69.7
93	26.6	19.0	28.6
128	51.5	37.8	56.6

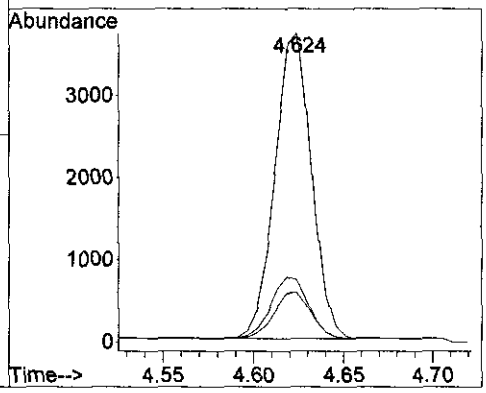


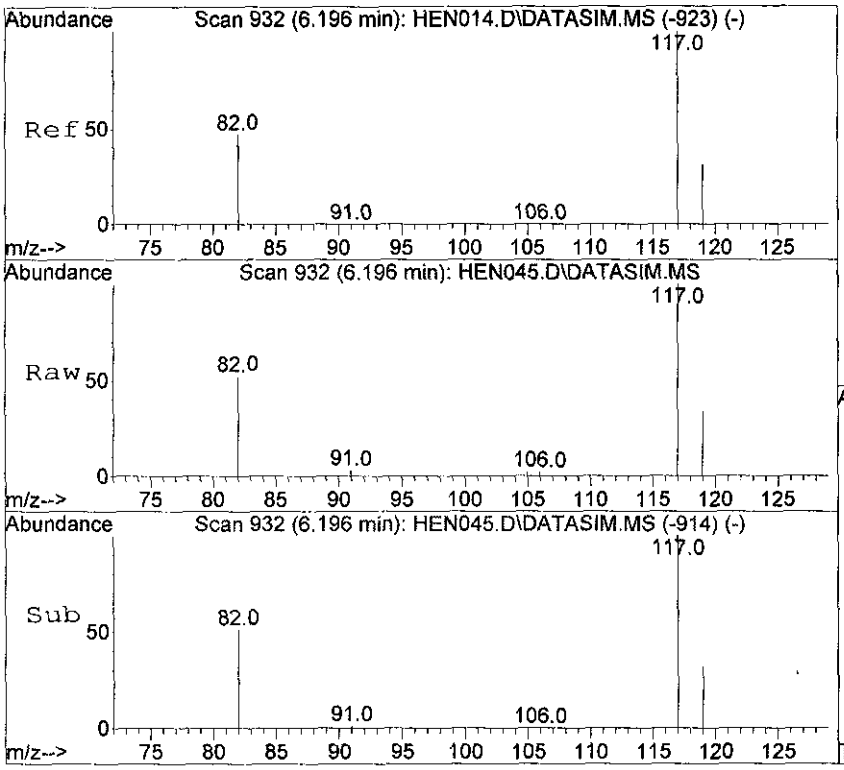


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.624 min Scan# 580
Delta R.T. 0.004 min
Lab File: HEN045.D
Acq: 21 Mar 2012 20:53

Tgt Ion:114 Resp: 5229

Ion	Ratio	Lower	Upper
114	100		
63	20.4	16.7	25.1
88	15.2	12.2	18.2

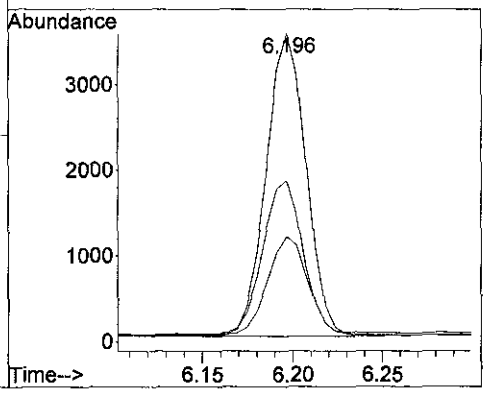


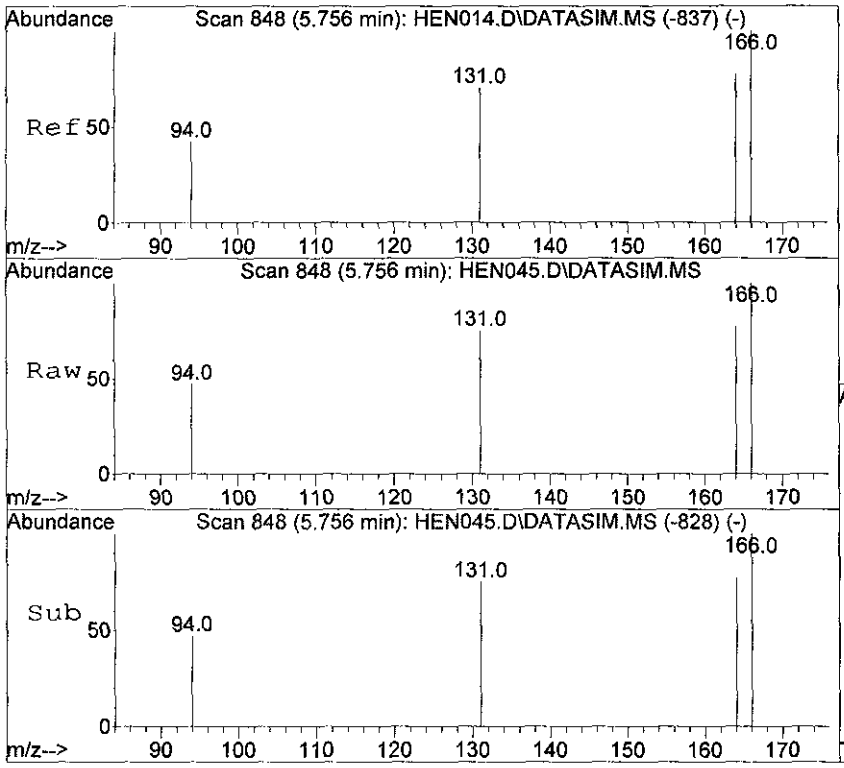


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.196 min Scan# 932
Delta R.T. -0.000 min
Lab File: HEN045.D
Acq: 21 Mar 2012 20:53

Tgt Ion:117 Resp: 5437

Ion	Ratio	Lower	Upper
117	100		
82	52.4	41.4	62.0
119	32.9	25.8	38.6

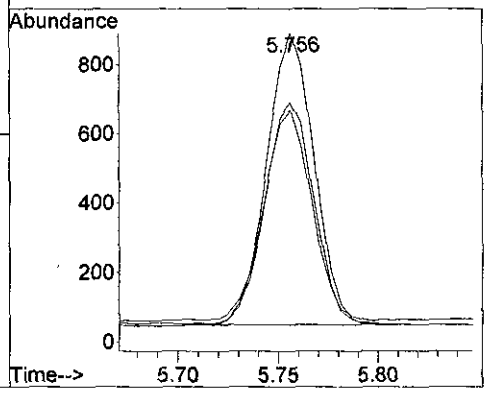




#14
Tetrachloroethene
Concen: 7.78 ppbv m
RT: 5.756 min Scan# 848
Delta R.T. -0.000 min
Lab File: HEN045.D
Acq: 21 Mar 2012 20:53

Tgt Ion:166 Resp: 1391

Ion	Ratio	Lower	Upper
166	100		
164	79.0	62.5	93.7
131	72.3	57.0	85.4



Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN046.D
Acq On : 21 Mar 2012 21:04
Operator : SJT
Sample : 51123 \ BLDG P2-SS-04
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 21:24:14 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

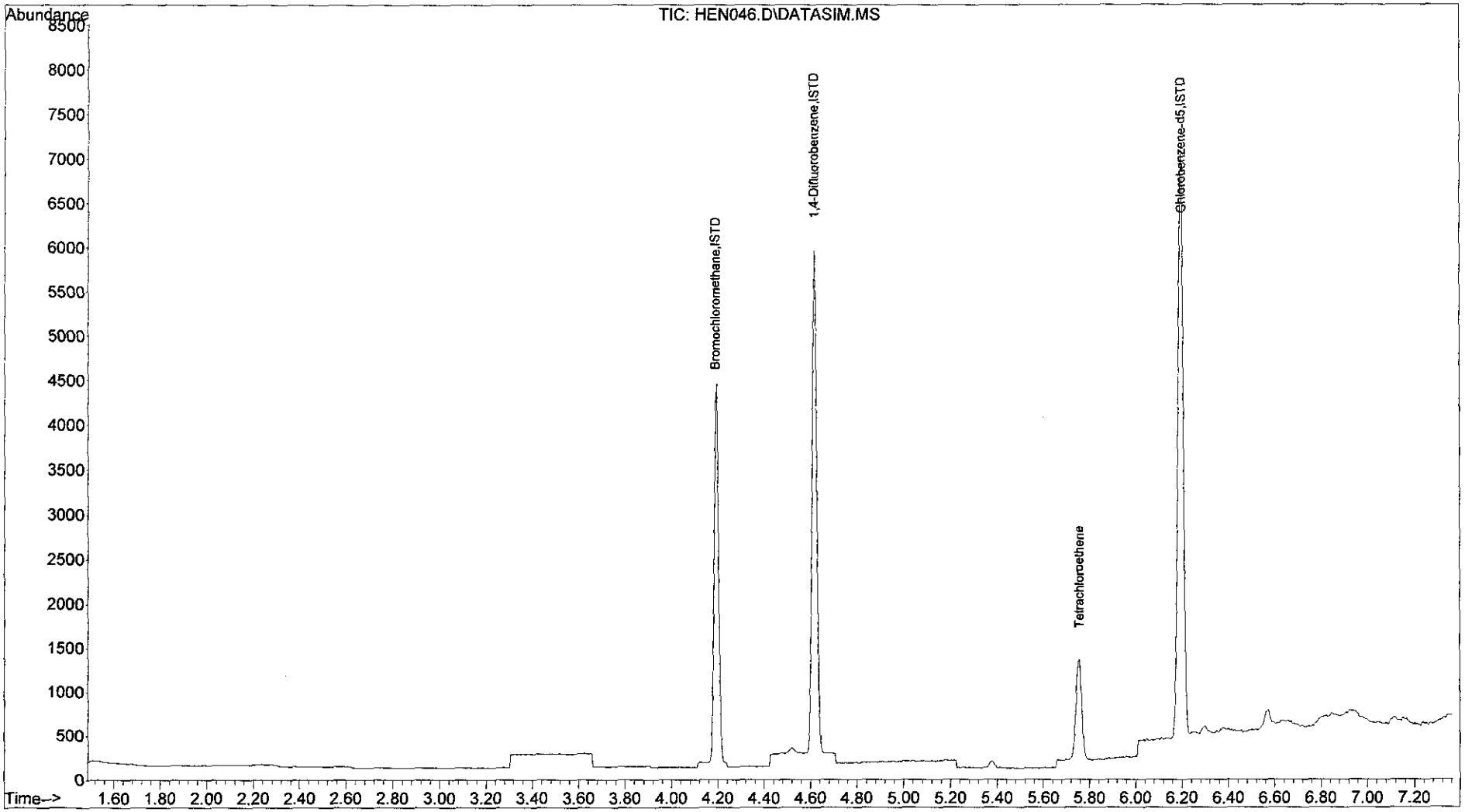
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.192	49	2362	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.620	114	5465	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.198	117	5649m	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
14) Tetrachloroethene	5.757	166	663m	3.57	ppbv	

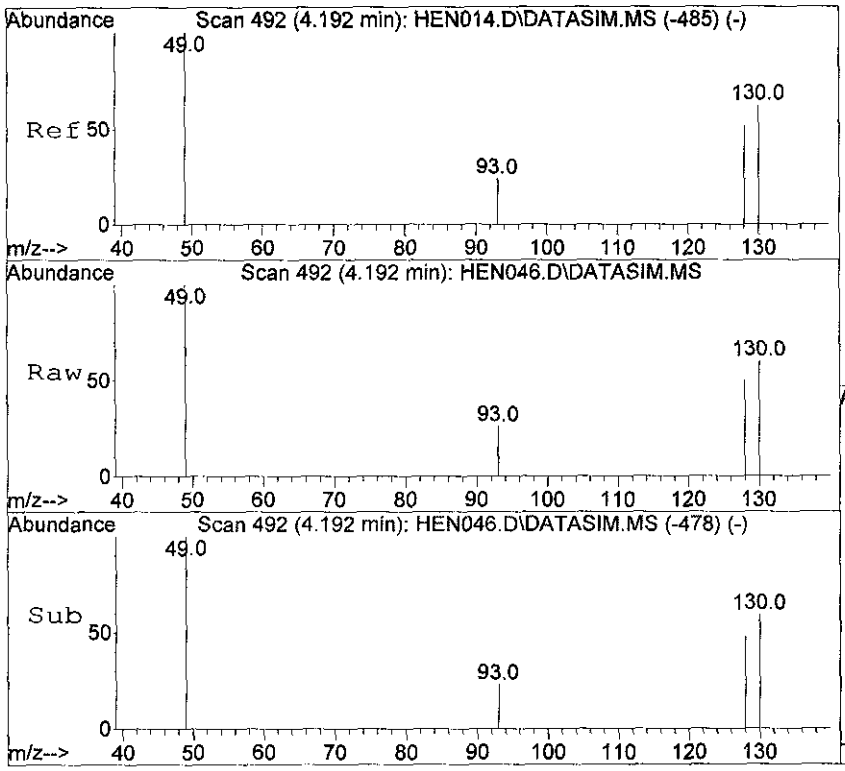
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\msdchem\1\data\2012\20120321\
Data File : HEN046.D
Acq On : 21 Mar 2012 21:04
Operator : SJT
Sample : 51123 \ BLDG P2-SS-04
Misc : 5mL \ 21 Mar 2012
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 21:24:14 2012
Quant Method : C:\msdchem\1\METHODS\LOOP20120316-Quant.m
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Mar 21 06:40:17 2012
QLast Update : Wed Mar 21 06:40:17 2012
Response via : Initial Calibration

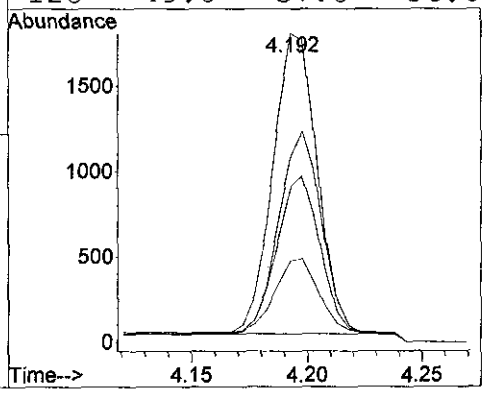


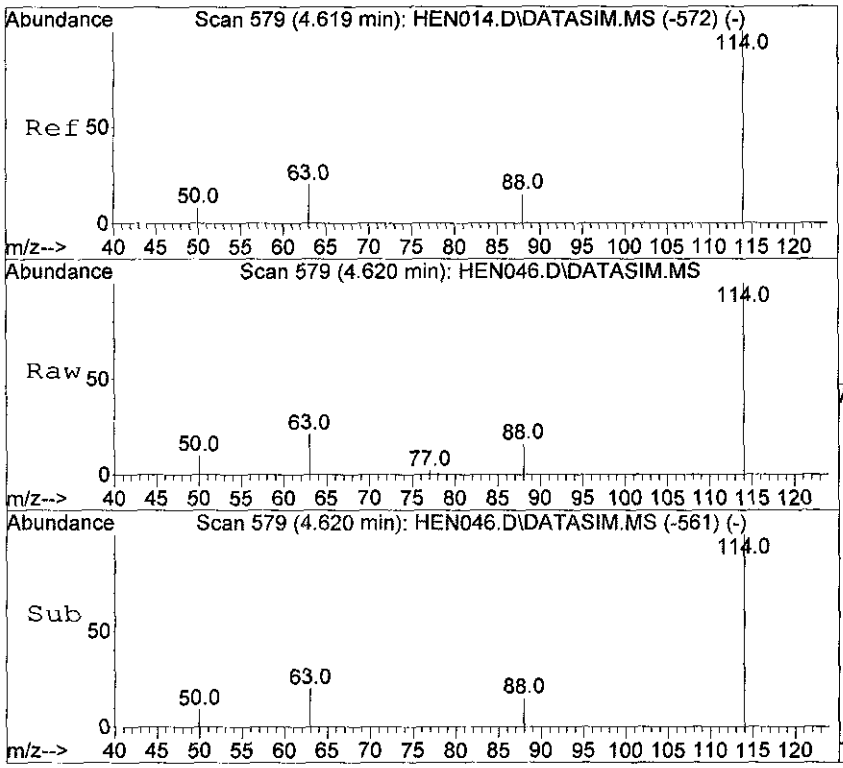


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.192 min Scan# 492
Delta R.T. 0.000 min
Lab File: HEN046.D
Acq: 21 Mar 2012 21:04

Tgt Ion: 49 Resp: 2362

Ion	Ratio	Lower	Upper
49	100		
130	59.7	46.5	69.7
93	26.0	19.0	28.6
128	49.8	37.8	56.6

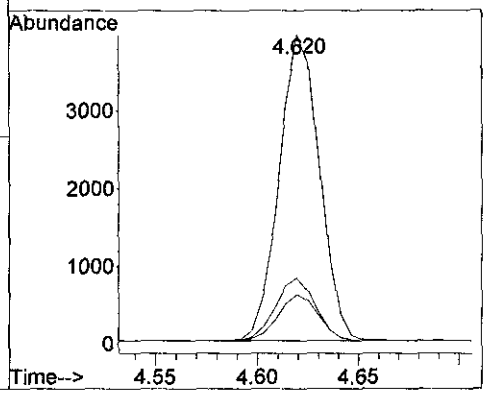


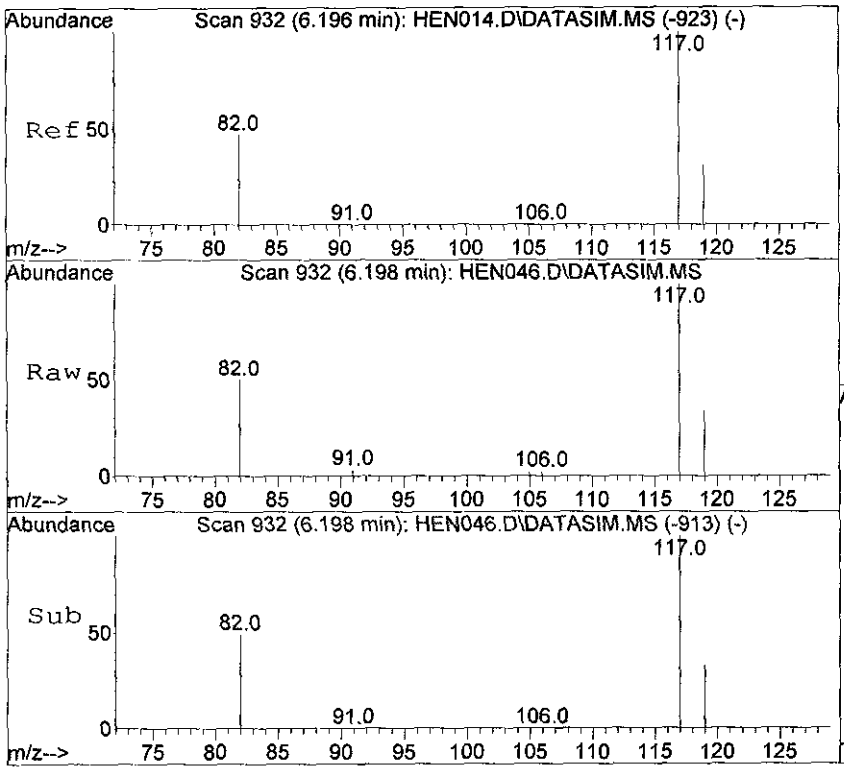


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.620 min Scan# 579
Delta R.T. 0.000 min
Lab File: HEN046.D
Acq: 21 Mar 2012 21:04

Tgt Ion:114 Resp: 5465

Ion	Ratio	Lower	Upper
114	100		
63	20.2	16.7	25.1
88	15.0	12.2	18.2

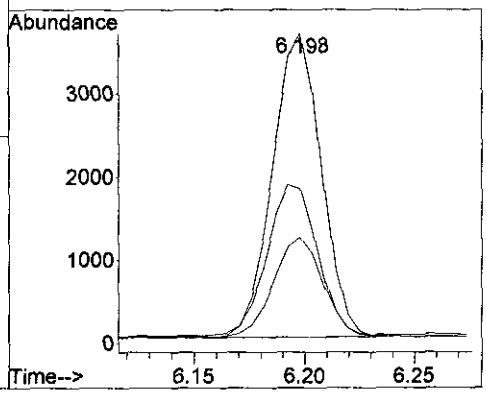


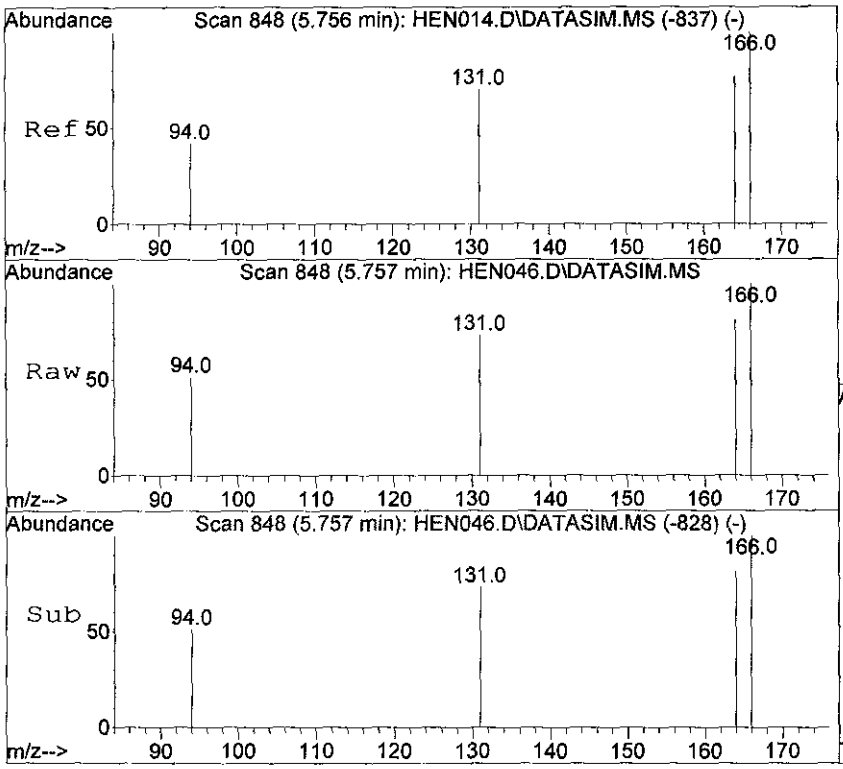


#12
Chlorobenzene-d5
Concen: 10.00 ppbv m
RT: 6.198 min Scan# 932
Delta R.T. 0.001 min
Lab File: HEN046.D
Acq: 21 Mar 2012 21:04

Tgt Ion:117 Resp: 5649

Ion	Ratio	Lower	Upper
117	100		
82	51.5	41.4	62.0
119	32.9	25.8	38.6

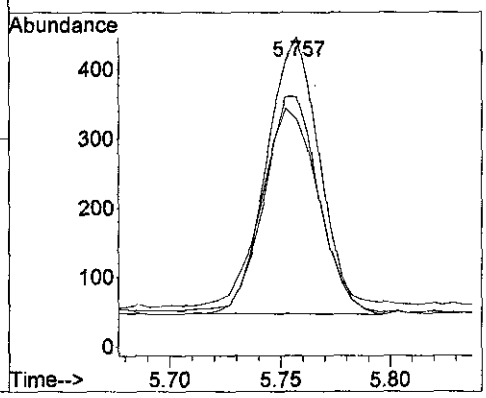




#14
Tetrachloroethene
Concen: 3.57 ppbv m
RT: 5.757 min Scan# 848
Delta R.T. 0.001 min
Lab File: HEN046.D
Acq: 21 Mar 2012 21:04

Tgt Ion:166 Resp: 663

Ion	Ratio	Lower	Upper
166	100		
164	80.1	62.5	93.7
131	77.5	57.0	85.4



APPENDIX B

Analytical Report

Henry's Dry Cleaners Site

Trip Report

May 2012

ANALYTICAL REPORT

Prepared by
Lockheed Martin Information Systems and Global Services/Environmental Services
Scientific, Engineering, Response and Analytical Services

Henry's Dry Cleaners Site
Laconia, New Hampshire

April 2012

EPA Work Assignment No. SERAS-167
LOCKHEED MARTIN Work Order SER0167
EPA Contract No. EP-W-09-031

Submitted to
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109 T.W. Alexander Drive
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V. Kansal — Date
Analytical Support Leader

4/16/12
D. Killeen — Date
QA/QC Officer

4/17/12
D. Miller — Date
Program Manager

Analysis by:
Contest Analytical

Prepared by:
Y. Mehra

Validated by:
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J. Soroka

REPORT OF LABORATORY ANALYSIS
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Communications
Chains of Custody

Appendices

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Appendix B Data for VOC in Air — X 046

Appendices will be furnished on request.

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TESTING LABORATORIES INFORMATION

Analysis of Volatile Organic Compounds in Air (EPA Method TO-15)

Con-test Analytical Laboratory
39 Spruce Street
East Longmeadow MA 01028

All analyses were performed according to our NELAP-approved quality assurance program. The test results meet the requirements of the current NELAP standards, where applicable, except as noted in the laboratory case narrative provided. Results are intended to be considered in their entirety and apply only to those analyzed and reported herein.

Contest Analytical Laboratory is certified by the New York Department of Health, NELAP Laboratory Certification Number, NY10899, for TO-15 analysis in air.

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Detailed Sample Information

Contest Sample #	Field Sample #
12C0779-01	167-001
12C0779-02	167-002
12C0779-03	167-003
12C0779-04	167-005
12C0779-05	167-004
12C0779-06	167-006
12C0779-07	167-007
12C0779-08	167-009
12C0779-09	167-008
12C0779-10	167-010
12C0779-11	167-011
12C0779-12	167-012
12C0779-13	167-013
12C0779-14	167-014
12C0779-15	167-015
12C0779-16	167-016
12C0779-17	167-017
12C0779-18	167-021
12C0774-01	167-018
12C0774-02	167-019
12C0774-03	167-020

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Introduction

SERAS personnel, in response to WA# SERAS-167, provided analytical support for environmental samples collected from the Henry's Dry Cleaning Site in Laconia, New Hampshire, as described in the following table. The support also included QA/QC, data review and preparation of an analytical report containing analytical and QA/QC results.

The samples were treated with procedures consistent with those specified in SERAS SOP #1008, *Operation of Sample Refrigeration Units and Sample Receiving, Handling and Storage*.

Chain of Custody #	Number of Samples	Sampling Date	Date Received	Date Analyzed	Matrix	Analysis/ Method	Laboratory	Data Package
0-167-03/22/12-0001	4	03/22/12	03/24/12	03/27/12	Air	TO-15(VOC)	Contest Analytical	X 045
0-167-03/22/12-0002	4							
0-167-03/22/12-0003	4							
0-167-03/22/12-0004	4							
0-167-03/22/12-0005	1							
0-167-03/22/12-0006	1							
0-167-03/22/12-0005	3			03/28/12				X 046

Case Narrative

Sampling was conducted as per the site-specific Quality Assurance Project Plan (QAPP) and analyzed by the analytical methods stated in the QAPP. The laboratory reported the data to two significant figures. Any other representation of the data is the responsibility of the user. All data validation flags have been inserted into the results tables.

<u>TO-15 (VOC) in Air Package X 046</u>

The method blank contained methylene chloride. The methylene chloride result in sample 167-018 is qualified non-detect (U) and the reporting limit (RL) is raised to the sample result because the sample result was less than fivefold the method blank concentration.

<u>TO-15 (VOC) in Air Package X 045</u>

The data package was examined and found to be acceptable.

The results presented in this report only relate to the samples analyzed. All results are intended to be considered in their entirety. The Environmental Response Team/Scientific, Engineering, Response and Analytical Services laboratory is not responsible for utilization of less than the complete report.

Summary of Abbreviations

BFB	Bromofluorobenzene
C	Centigrade
CLP	Contract Laboratory Program
COC	Chain of Custody
conc	concentration
cont	continued
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
D	(Surrogate Table) value is from a diluted sample and was not calculated
Dioxin	Polychlorinated dibenzo-p-dioxins (PCDD) and Polychlorinated dibenzofurans (PCDF)
DFTPP	Decafluorotriphenylphosphine
EMPC	Estimated maximum possible concentration
GC/MS	Gas Chromatography/ Mass Spectrometry
IS	Internal Standard
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDA	Minimum Detectable Activity
MS (BS)	Matrix Spike (Blank Spike)
MSD (BSD)	Matrix Spike Duplicate (Blank Spike Duplicate)
MW	Molecular Weight
NA	Not Applicable or Not Available
NAD	Normalized Absolute Difference
NC	Not Calculated
NR	Not Requested/Not Reported
NS	Not Spiked
% D	Percent Difference
% REC	Percent Recovery
SOP	Standard Operating Procedure
ppbv	parts per billion by volume
ppm	parts per million
pptv	parts per trillion by volume
PQL	Practical Quantitation Limit
PAL	Performance Acceptance Limit
QA/QC	Quality Assurance/Quality Control
QL	Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
SERAS	Scientific, Engineering, Response and Analytical Services
SIM	Selected Ion Monitoring
Sur	Surrogate
TIC	Tentatively Identified Compound
TCLP	Toxicity Characteristic Leaching Procedure
VOC	Volatile Organic Compound
*	Value exceeds the acceptable QC limits

m^3	cubic meter	g	gram	kg	kilogram	L	liter
µg	microgram	µL	microliter	mg	milligram	mL	milliliter
ng	nanogram	pg	picogram	pCi	picocurie	s	sigma

Data Validation Flags

J	Value is estimated	R	Value is unusable
J+	Value is estimated high (metals only)	U	Not detected
J-	Value is estimated low (metals only)	UJ	Not detected and RL is estimated
N	Presumptively present (Aroclors only)		

Rev. 1/14/09

Table 1.1a Results of the Analysis for VOC (ppbv) in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Method : EPA TO-15

Lab Sample Number			12CO774-01		12CO774-02		12CO774-03	
Sample Number	3/28/2012 16:57		167-018		167-019		167-020	
Sample Location	B048898-BLK1		BLDG 6		BLDG 6		BLDG 6	
Sublocation			Port 3		Port 2		Port 1	
Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Propene	U	1.0	U	2.0	U	2.0	U	2.0
Dichlorodifluoromethane	U	0.025	0.65	0.050	0.50	0.050	1.9	0.050
Chloromethane	U	0.025	U	0.050	0.16	0.050	0.20	0.050
1,2-Dichloro-1,1,2,2-tetrafluoroethane	U	0.025	U	0.050	U	0.050	U	0.050
Vinyl Chloride	U	0.012	U	0.025	U	0.025	U	0.025
1,3-Butadiene	U	0.025	U	0.050	U	0.050	U	0.050
Bromomethane	U	0.025	U	0.050	U	0.050	U	0.050
Chloroethane	U	0.025	U	0.050	U	0.050	U	0.050
Ethanol	U	1.0	U	2.0	5.2	2.0	110	2.0
Acrolein	U	0.10	0.22	0.20	0.30	0.20	0.29	0.20
Acetone	U	1.0	3.5	2.0	4.1	2.0	16	2.0
Trichlorofluoromethane	U	0.025	1.2	0.050	0.21	0.050	0.48	0.050
Isopropanol	U	1.0	U	2.0	U	2.0	3.8	2.0
1,1-Dichloroethylene	U	0.012	U	0.025	U	0.025	0.037	0.025
Methylene Chloride	0.38	0.25	U	0.59	2.6	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.012	0.067	0.025	0.064	0.025	0.063	0.025
Carbon Disulfide	U	0.25	U	0.50	U	0.50	U	0.50
trans-1,2-Dichloroethylene	U	0.012	0.15	0.025	U	0.025	0.37	0.025
1,1-Dichloroethane	U	0.012	U	0.025	U	0.025	U	0.025
Methyl tert-Butyl Ether (MTBE)	U	0.025	U	0.050	U	0.050	U	0.050
Vinyl Acetate	U	0.050	0.25	0.10	U	0.10	U	0.10
2-Butanone (MEK)	U	1.0	U	2.0	U	2.0	U	2.0
cis-1,2-Dichloroethylene	U	0.012	3.3	0.025	0.21	0.025	24	0.025
Hexane	U	1.0	U	2.0	U	2.0	U	2.0
Ethyl Acetate	U	0.025	U	0.050	0.12	0.050	0.58	0.050
Chloroform	U	0.012	1.0	0.025	0.16	0.025	1.1	0.025
Tetrahydrofuran	U	0.025	0.17	0.050	0.12	0.050	0.095	0.050
1,2-Dichloroethane	U	0.025	U	0.050	0.30	0.050	0.10	0.050
1,1,1-Trichloroethane	U	0.012	U	0.025	U	0.025	U	0.025
Benzene	U	0.025	U	0.050	0.052	0.050	0.097	0.050
Carbon Tetrachloride	U	0.012	0.083	0.025	0.078	0.025	0.085	0.025
Cyclohexane	U	0.025	U	0.050	U	0.050	0.097	0.050
1,2-Dichloropropane	U	0.012	U	0.025	U	0.025	U	0.025
Bromodichloromethane	U	0.025	U	0.050	U	0.050	U	0.050
Trichloroethylene	U	0.012	7.2	0.025	0.39	0.025	22	0.025
1,4-Dioxane	U	0.025	U	0.050	U	0.050	U	0.050
Heptane	U	0.025	U	0.050	U	0.050	0.060	0.050
cis-1,3-Dichloropropene	U	0.012	U	0.025	U	0.025	U	0.025
4-Methyl-2-pentanone (MIBK)	U	0.025	U	0.050	0.14	0.050	0.14	0.050
trans-1,3-Dichloropropene	U	0.012	U	0.025	U	0.025	U	0.025
1,1,2-Trichloroethane	U	0.012	U	0.025	U	0.025	U	0.025
Toluene	U	0.025	U	0.050	0.15	0.050	0.38	0.050
2-Hexanone (MBK)	U	0.025	0.071	0.050	U	0.050	0.084	0.050
Dibromochloromethane	U	0.025	U	0.050	U	0.050	U	0.050
1,2-Dibromoethane (EDB)	U	0.012	U	0.025	U	0.025	U	0.025
Tetrachloroethylene	U	0.012	92	1.0	6.2	0.025	530	1.0
Chlorobenzene	U	0.025	U	0.050	U	0.050	U	0.050
Ethylbenzene	U	0.025	U	0.050	U	0.050	0.051	0.050
m&p-Xylene	U	0.050	U	0.10	U	0.10	0.12	0.10
Bromoform	U	0.025	U	0.050	U	0.050	U	0.050
Styrene	U	0.025	U	0.050	U	0.050	0.056	0.050
1,1,2,2-Tetrachloroethane	U	0.012	U	0.025	U	0.025	U	0.025
o-Xylene	U	0.025	U	0.050	U	0.050	0.051	0.050
4-Ethyltoluene	U	0.025	U	0.050	U	0.050	U	0.050
1,3,5-Trimethylbenzene	U	0.025	U	0.050	U	0.050	U	0.050
1,2,4-Trimethylbenzene	U	0.025	U	0.050	U J	0.050	0.086	0.050
Benzyl chloride	U	0.025	U	0.050	U	0.050	U	0.050
1,3-Dichlorobenzene	U	0.025	U	0.050	U	0.050	U	0.050
1,4-Dichlorobenzene	U	0.025	U	0.050	U	0.050	U	0.050
1,2-Dichlorobenzene	U	0.025	U	0.050	U	0.050	U	0.050
1,2,4-Trichlorobenzene	U	0.050	U	0.10	U	0.10	U	0.10
Naphthalene	U	0.025	U	0.050	0.19	0.050	0.13	0.050
Hexachlorobutadiene	U	0.025	U	0.050	U	0.050	U	0.050

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Table 1.1a (cont) Results of the Analysis for VOC (ppbv) in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Method : EPA TO-15

Lab Sample Number			12CO779-21		12CO779-01		12CO779-02		12CO779-03	
Sample Number	3/27/2012		167-021		167-001		167-002		167-003	
Sample Location	B048884-BLK1		Trip Blank		Unit 006		Unit 002		Unit 003	
Sublocation					IA1		IA1		IA1	
Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Vinyl Chloride	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
1,1-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
trans-1,2-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
cis-1,2-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
Trichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
Tetrachloroethylene	U	0.025	U	0.025	0.28	0.025	0.063	0.025	0.094	0.025

Table 1.1a (cont) Results of the Analysis for VOC (ppbv) in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Method : EPA TO-15

Lab Sample Number	12CO779-04		12CO779-05		12CO779-06		12CO779-07		12CO779-08	
Sample Number	167-005		167-004		167-006		167-007		167-009	
Sample Location	Unit 005		Unit 005		Unit 004		Unit 001		Unit 007	
Sublocation	IA2		IA1		IA1		IA1		IA2	
Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Vinyl Chloride	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
1,1-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
trans-1,2-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
cis-1,2-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
Trichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
Tetrachloroethylene	0.12	0.025	0.13	0.025	0.14	0.025	0.049	0.025	0.77	0.025

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Table 1.1a (cont) Results of the Analysis for VOC (ppbv) in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Method : EPA TO-15

Lab Sample Number	12CO779-09		12CO779-10		12CO779-11		12CO779-12		12CO779-13	
Sample Number	167-008		167-010		167-011		167-012		167-013	
Sample Location	Unit 007		Unit 010		Unit 009		Unit 008		Unit 011	
Sublocation	IA1		IA1		IA1		IA1		IA1	
Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Vinyl Chloride	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
1,1-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
trans-1,2-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
cis-1,2-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
Trichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
Tetrachloroethylene	0.75	0.025	0.13	0.025	0.089	0.025	0.69	0.025	0.060	0.025

Table 1.1a (cont) Results of the Analysis for VOC (ppbv) in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Method : EPA TO-15

Lab Sample Number	12CO779-14		12CO779-15		12CO779-16		12CO779-17	
Sample Number	167-014		167-015		167-016		167-017	
Sample Location	Unit 012		AMB001		AMB001		AMB002	
Sublocation	IA1		OA1		OA2		OA1	
Analyte	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv	Result ppbv	RL ppbv
Vinyl Chloride	U	0.025	U	0.025	U	0.025	U	0.025
1,1-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025
trans-1,2-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025
cis-1,2-Dichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025
Trichloroethylene	U	0.025	U	0.025	U	0.025	U	0.025
Tetrachloroethylene	0.043	0.025	U	0.025	U	0.025	U	0.025

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Table 1.1b Results of the Analysis for VOC (µg/m^3) in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Method : EPA TO-15

Lab Sample Number			12CO774-01		12CO774-02		12CO774-03	
Sample Number	3/28/2012 16:57		167-018		167-019		167-020	
Sample Location	B048898-BLK1		BLDG 6		BLDG 6		BLDG 6	
Sublocation			Port 3		Port 2		Port 1	
Analyte	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3
Propene	U	1.7	U	3.4	U	3.4	U	3.4
Dichlorodifluoromethane	U	0.13	3.2	0.25	2.5	0.25	9.4	0.25
Chloromethane	U	0.050	U	0.10	0.32	0.10	0.41	0.10
1,2-Dichloro-1,1,2,2-tetrafluoroethane	U	0.18	U	0.35	U	0.35	U	0.35
Vinyl Chloride	U	0.032	U	0.064	U	0.064	U	0.064
1,3-Butadiene	U	0.055	U	0.11	U	0.11	U	0.11
Bromomethane	U	0.095	U	0.19	U	0.19	U	0.19
Chloroethane	U	0.065	U	0.13	U	0.13	U	0.13
Ethanol	U	1.9	U	3.8	9.8	3.8	200	3.8
Acrolein	u	0.23	0.51	0.46	0.69	0.46	0.66	0.46
Acetone	U	2.4	8.2	4.8	9.7	4.8	37	4.8
Trichlorofluoromethane	U	0.14	6.6	0.28	1.2	0.28	2.7	0.28
Isopropanol	U	2.5	U	4.9	U	4.9	9.4	4.9
1,1-Dichloroethylene	U	0.050	U	0.099	U	0.099	0.15	0.099
Methylene Chloride	1.3	0.85	U	2.1	9.1	1.7	U	1.7
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.095	0.51	0.19	0.49	0.19	0.48	0.19
Carbon Disulfide	U	0.80	U	1.6	U	1.6	U	1.6
trans-1,2-Dichloroethylene	U	0.050	0.61	0.099	U	0.099	1.5	0.099
1,1-Dichloroethane	U	0.050	U	0.10	U	0.10	U	0.10
Methyl tert-Butyl Ether (MTBE)	U	0.090	U	0.18	U	0.18	U	0.18
Vinyl Acetate	U	0.18	0.86	0.35	U	0.35	U	0.35
2-Butanone (MEK)	U	3.0	U J	5.9	U	5.9	U	5.9
cis-1,2-Dichloroethylene	U	0.050	13	0.099	0.84	0.099	94	0.099
Hexane	U	3.5	U J	7.0	U	7.0	U	7.0
Ethyl Acetate	U	0.090	U	0.18	0.42	0.18	2.1	0.18
Chloroform	U	0.060	5.0	0.12	0.79	0.12	5.5	0.12
Tetrahydrofuran	U	0.075	0.49	0.15	0.36	0.15	0.28	0.15
1,2-Dichloroethane	U	0.10	U	0.20	1.2	0.20	0.41	0.20
1,1,1-Trichloroethane	U	0.070	U	0.14	U	0.14	U	0.14
Benzene	U	0.080	U	0.16	0.17	0.16	0.31	0.16
Carbon Tetrachloride	U	0.080	0.52	0.16	0.49	0.16	0.53	0.16
Cyclohexane	U	0.085	U	0.17	U	0.17	0.33	0.17
1,2-Dichloropropane	U	0.060	U	0.12	U	0.12	U	0.12
Bromodichloromethane	U	0.17	U	0.34	U	0.34	U	0.34
Trichloroethylene	U	0.065	38	0.13	2.1	0.13	120	0.13
1,4-Dioxane	U	0.090	U	0.18	U	0.18	U	0.18
Heptane	U	0.10	U	0.20	U	0.20	0.25	0.20
cis-1,3-Dichloropropene	U	0.055	U	0.11	U	0.11	U	0.11
4-Methyl-2-pentanone (MIBK)	U	0.10	U	0.20	0.55	0.20	0.57	0.20
trans-1,3-Dichloropropene	U	0.055	U	0.11	U	0.11	U	0.11
1,1,2-Trichloroethane	U	0.070	U	0.14	U	0.14	U	0.14
Toluene	U	0.095	U	0.19	0.55	0.19	1.4	0.19
2-Hexanone (MBK)	U	0.10	0.29	0.20	U	0.20	0.34	0.20
Dibromochloromethane	U	0.22	U	0.43	U	0.43	U	0.43
1,2-Dibromoethane (EDB)	U	0.095	U	0.19	U	0.19	U	0.19
Tetrachloroethylene	U	0.085	620	6.8	42	0.17	3600	7.0
Chlorobenzene	U	0.12	U	0.23	U	0.23	U	0.23
Ethylbenzene	U	0.11	U	0.22	U	0.22	0.22	0.22
m&p-Xylene	U	0.22	U	0.43	U J	0.43	0.54	0.43
Bromoform	U	0.26	U	0.52	U	0.52	U	0.52
Styrene	U	0.11	U	0.21	U	0.21	0.24	0.21
1,1,2,2-Tetrachloroethane	U	0.085	U	0.17	U	0.17	U	0.17
o-Xylene	U	0.11	U	0.22	U	0.22	0.22	0.22
4-Ethyltoluene	U	0.13	U	0.25	U	0.25	U	0.25
1,3,5-Trimethylbenzene	U	0.13	U	0.25	U	0.25	U	0.25
1,2,4-Trimethylbenzene	U	0.13	U	0.25	U	0.25	0.42	0.25
Benzyl chloride	U	0.13	U	0.26	U	0.26	U	0.26
1,3-Dichlorobenzene	U	0.15	U	0.30	U	0.30	U	0.30
1,4-Dichlorobenzene	U	0.15	U	0.30	U	0.30	U	0.30
1,2-Dichlorobenzene	U	0.15	U	0.30	U	0.30	U	0.30
1,2,4-Trichlorobenzene	U	0.37	U	0.74	U	0.74	U	0.74
Naphthalene	U	0.13	U	0.26	1.0	0.26	0.70	0.26
Hexachlorobutadiene	U	0.27	U	0.53	U	0.53	U	0.53

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Table 1.1b (cont) Results of the Analysis for VOC (µg/m^3) in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Method : EPA TO-15

Lab Sample Number			12CO779-21		12CO779-01		12CO779-02		12CO779-03	
Sample Number	3/27/2012		167-021		167-001		167-002		167-003	
Sample Location	B048884-BLK1		Trip Blank		Unit 006		Unit 002		Unit 003	
Sublocation					IA1		IA1		IA1	
Analyte	Result ppbv	RL ppbv	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3
Vinyl Chloride	U	0.064	U	0.064	U	0.064	U	0.064	U	0.064
1,1-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099	U	0.099
trans-1,2-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099	U	0.099
cis-1,2-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099	U	0.099
Trichloroethylene	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13
Tetrachloroethylene	U	0.17	U	0.17	1.9	0.17	0.43	0.17	0.64	0.17

Table 1.1b (cont) Results of the Analysis for VOC (µg/m^3) in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Method : EPA TO-15

Lab Sample Number	12CO779-04		12CO779-05		12CO779-06		12CO779-07		12CO779-08	
Sample Number	167-005		167-004		167-006		167-007		167-009	
Sample Location	Unit 005		Unit 005		Unit 004		Unit 001		Unit 007	
Sublocation	IA2		IA1		IA1		IA1		IA2	
Analyte	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3
Vinyl Chloride	U	0.064	U	0.064	U	0.064	U	0.064	U	0.064
1,1-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099	U	0.099
trans-1,2-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099	U	0.099
cis-1,2-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099	U	0.099
Trichloroethylene	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13
Tetrachloroethylene	0.85	0.17	0.89	0.17	0.98	0.17	0.33	0.17	5.2	0.17

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Table 1.1b (cont) Results of the Analysis for VOC (µg/m^3) in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Method : EPA TO-15

Lab Sample Number	12CO779-09		12CO779-10		12CO779-11		12CO779-12		12CO779-13	
Sample Number	167-008		167-010		167-011		167-012		167-013	
Sample Location	Unit 007		Unit 010		Unit 009		Unit 008		Unit 011	
Sublocation	IA1		IA1		IA1		IA1		IA1	
Analyte	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3
Vinyl Chloride	U	0.064	U	0.064	U	0.064	U	0.064	U	0.064
1,1-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099	U	0.099
trans-1,2-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099	U	0.099
cis-1,2-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099	U	0.099
Trichloroethylene	U	0.13	U	0.13	U	0.13	U	0.13	U	0.13
Tetrachloroethylene	5.1	0.17	0.91	0.17	0.60	0.17	4.7	0.17	0.41	0.17

Table 1.1b (cont) Results of the Analysis for VOC (µg/m^3) in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Method : EPA TO-15

Lab Sample Number	12CO779-14		12CO779-15		12CO779-16		12CO779-17	
Sample Number	167-014		167-015		167-016		167-017	
Sample Location	Unit 012		AMB001		AMB001		AMB002	
Sublocation	IA1		OA1		OA2		OA1	
Analyte	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3	Result µg/m^3	RL µg/m^3
Vinyl Chloride	U	0.064	U	0.064	U	0.064	U	0.064
1,1-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099
trans-1,2-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099
cis-1,2-Dichloroethylene	U	0.099	U	0.099	U	0.099	U	0.099
Trichloroethylene	U	0.13	U	0.13	U	0.13	U	0.13
Tetrachloroethylene	0.29	0.17	U	0.17	U	0.17	U	0.17

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Table 2.1 Results of the LCS Analysis for VOC in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Sample ID: B048898-BS1

Analyte	LCS Spike Added ppbv	LCS Recovered ppbv	LCS % Recovery	QC Limits % Recovery
Propene	5.00	5.77	115	50-150
Dichlorodifluoromethane	5.00	4.69	94	70-130
Chloromethane	5.00	4.95	99	70-130
1,2-Dichloro-1,1,2,2-tetrafluoroethane	5.00	4.54	91	70-130
Vinyl Chloride	5.00	4.30	91	70-130
1,3-Butadiene	5.00	4.79	96	70-130
Bromomethane	5.00	3.82	77	70-130
Chloroethane	5.00	4.52	90	70-130
Ethanol	5.00	4.09	82	70-130
Acrolein	5.00	3.96	79	70-130
Acetone	5.00	4.72	94	70-130
Trichlorofluoromethane	5.00	3.92	78	70-130
Isopropanol	5.00	4.22	84	50-150
1,1-Dichloroethylene	5.00	4.45	89	70-130
Methylene Chloride	5.00	4.84	97	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane	5.00	4.06	81	70-130
Carbon Disulfide	5.00	3.70	74	70-130
trans-1,2-Dichloroethylene	5.00	4.12	82	70-130
1,1-Dichloroethane	5.00	4.25	87	70-130
Methyl tert-Butyl Ether (MTBE)	5.00	4.27	85	70-130
Vinyl Acetate	5.00	4.96	99	70-130
2-Butanone (MEK)	5.00	4.63	93	70-130
cis-1,2-Dichloroethylene	5.00	4.39	88	70-130
Hexane	5.00	5.18	104	70-130
Ethyl Acetate	5.00	4.04	81	50-150
Chloroform	5.00	4.18	84	70-130
Tetrahydrofuran	5.00	4.26	85	50-150
1,2-Dichloroethane	5.00	4.52	91	70-130
1,1,1-Trichloroethane	5.00	4.68	94	70-130
Benzene	5.00	4.32	86	70-130
Carbon Tetrachloride	5.00	5.21	104	70-130
Cyclohexane	5.00	4.46	89	50-150
1,2-Dichloropropane	5.00	4.57	91	70-130
Bromodichloromethane	5.00	4.69	94	70-130
Trichloroethylene	5.00	4.43	89	70-130
1,4-Dioxane	5.00	4.29	86	70-130
Heptane	5.00	4.96	99	50-150
cis-1,3-Dichloropropene	5.00	4.93	99	70-130
4-Methyl-2-pentanone (MIBK)	5.00	5.00	99	70-130
trans-1,3-Dichloropropene	5.00	4.74	95	70-130
1,1,2-Trichloroethane	5.00	4.24	85	70-130
Toluene	5.00	4.54	91	70-130
2-Hexanone (MBK)	5.00	4.95	100	50-150
Dibromochloromethane	5.00	4.58	92	70-130
1,2-Dibromoethane (EDB)	5.00	4.25	85	70-130
Tetrachloroethylene	5.00	4.04	81	70-130
Chlorobenzene	5.00	4.25	85	70-130
Ethylbenzene	5.00	4.68	94	70-130
m&p-Xylene	10.0	9.67	97	70-130
Bromoform	5.00	4.84	97	70-130
Styrene	5.00	4.71	94	70-130
1,1,2,2-Tetrachloroethane	5.00	4.30	86	70-130
o-Xylene	5.00	4.74	95	70-130
4-Ethyltoluene	5.00	4.59	92	50-150
1,3,5-Trimethylbenzene	5.00	4.77	95	70-130
1,2,4-Trimethylbenzene	5.00	4.74	95	70-130
Benzyl chloride	5.00	5.78	116	70-130
1,3-Dichlorobenzene	5.00	4.48	90	70-130
1,4-Dichlorobenzene	5.00	4.37	87	70-130
1,2-Dichlorobenzene	5.00	4.38	88	70-130
1,2,4-Trichlorobenzene	5.00	4.58	92	70-130
Naphthalene	5.00	3.97	79	50-150
Hexachlorobutadiene	5.00	4.39	88	70-130

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Table 2.1 (cont) Results of the LCS Analysis for VOC in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Sample ID: B048884-BS1

Analyte	LCS Spike Added ppbv	LCS Recovered ppbv	LCS % Recovery	QC Limits % Recovery
Vinyl Chloride	5.00	4.60	92	70-130
1,1-Dichloroethylene	5.00	4.44	89	70-130
trans-1,2-Dichloroethylene	5.00	4.14	83	70-130
cis-1,2-Dichloroethylene	5.00	4.29	86	70-130
Trichloroethylene	5.00	4.62	92	70-130
Tetrachloroethylene	5.00	4.13	83	70-130

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Table 2.2 Results of the Duplicate Analysis for VOC in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Sample ID: 167-020

Analyte	Initial Analysis (ppbv)	Duplicate Analysis (ppbv)	% RPD	QC Limits % RPD
Propene	U	U	NC	25
Dichlorodifluoromethane	1.9	1.9	1.71	25
Chloromethane	0.20	0.23	15.5	25
1,2-Dichloro-1,1,2,2-tetrafluoroethan	U	U	NC	25
Vinyl Chloride	U	U	NC	25
1,3-Butadiene	U	U	NC	25
Bromomethane	U	U	NC	25
Chloroethane	U	U	NC	25
Ethanol	110	130	19.6	25
Acrolein	0.29	0.33	13.1	25
Acetone	16	17	6.35	25
Trichlorofluoromethane	0.48	0.51	7.47	25
Isopropanol	3.8	4.1	5.87	25
1,1-Dichloroethylene	0.037	0.041	10.3	25
Methylene Chloride	U	U	NC	25
1,1,2-Trichloro-1,2,2-trifluoroethane	0.063	0.057	10.0	25
Carbon Disulfide	U	U	NC	25
trans-1,2-Dichloroethylene	0.37	0.39	3.96	25
1,1-Dichloroethane	U	U	NC	25
Methyl tert-Butyl Ether (MTBE)	U	U	NC	25
Vinyl Acetate	U	U	NC	25
2-Butanone (MEK)	U	U	NC	25
cis-1,2-Dichloroethylene	24	23	2.66	25
Hexane	U	U	NC	25
Ethyl Acetate	0.58	0.55	5.49	25
Chloroform	1.1	1.2	1.75	25
Tetrahydrofuran	0.095	0.10	10.0	25
1,2-Dichloroethane	0.10	0.10	1.94	25
1,1,1-Trichloroethane	U	U	NC	25
Benzene	0.097	0.094	3.14	25
Carbon Tetrachloride	0.085	0.087	2.33	25
Cyclohexane	0.097	0.11	15.2	25
1,2-Dichloropropane	U	U	NC	25
Bromodichloromethane	U	U	NC	25
Trichloroethylene	22	22	1.09	25
1,4-Dioxane	U	U	NC	25
Heptane	0.060	0.066	9.52	25
cis-1,3-Dichloropropene	U	U	NC	25
4-Methyl-2-pentanone (MIBK)	0.14	0.12	12.3	25
trans-1,3-Dichloropropene	U	U	NC	25
1,1,2-Trichloroethane	U	U	NC	25
Toluene	0.38	0.38	1.31	25
2-Hexanone (MBK)	0.084	0.085	1.18	25
Dibromochloromethane	U	U	NC	25
1,2-Dibromoethane (EDB)	U	U	NC	25
Tetrachloroethylene	530	530	NC	25
Chlorobenzene	U	U	NC	25
Ethylbenzene	0.051	0.050	1.98	25
m&p-Xylene	0.12	0.12	1.61	25
Bromoform	U	U	NC	25
Styrene	0.056	0.059	5.22	25
1,1,2,2-Tetrachloroethane	U	U	NC	25
o-Xylene	0.051	0.052	1.94	25
4-Ethyltoluene	U	U	NC	25
1,3,5-Trimethylbenzene	U	U	NC	25
1,2,4-Trimethylbenzene	0.086	0.087	1.16	25
Benzyl chloride	U	U	NC	25
1,3-Dichlorobenzene	U	U	NC	25
1,4-Dichlorobenzene	U	U	NC	25
1,2-Dichlorobenzene	U	U	NC	25
1,2,4-Trichlorobenzene	U	U	NC	25
Naphthalene	0.13	0.14	5.09	25
Hexachlorobutadiene	U	U	NC	25

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Table 2.2 (cont) Results of the Duplicate Analysis for VOC in Air
WA # SERAS-167 Henry's Dry Cleaning Site

Sample ID: 167-017

Analyte	Initial Analysis (ppbv)	Duplicate Analysis (ppbv)	% RPD	QC Limits % RPD
Vinyl Chloride	U	U	NC	25
1,1-Dichloroethylene	U	U	NC	25
trans-1,2-Dichloroethylene	U	U	NC	25
cis-1,2-Dichloroethylene	U	U	NC	25
Trichloroethylene	U	U	NC	25
Tetrachloroethylene	U	U	NC	25

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Lockheed Martin
Scientific Engineering Response and Analytical Services
2890 Woodbridge Avenue Building 209
Edison, NJ 08837-3679
Telephone 732-321-4200 Facsimile 732-494-4021

LOCKHEED MARTIN

Contest Analytical
39 Spruce Street
East Long Meadow, MA
01028

Attn: Tim Kelley

March 13, 2012

As per Lockheed Martin purchase order # 4100385594, for Project 0167, please analyze samples according to the following parameters:

Analysis/Method	Matrix	# of samples
VOA/TO-15 SIM See Attached List	Summa/Air	20

The samples are expected to arrive at your laboratory on or about March 22, 2012. All applicable QA/QC (eg: Duplicates, and Blanks) analysis as per method, will be performed on our sample matrix. Preliminary sample and QC sample result tables and a signed copy of our chain of custody must be sent to SERAS 5 business days after sample receipt.. The complete data package is due 10 business days after receipt of the samples. The complete data package must include all items on the deliverables checklist.

The laboratory must provide documentation for individual summa canister and flow controller certification.

All sample and QC results must be summarized in a tab delimited file diskette deliverable. Units must be in ppbv and ug/m3 in the electronic deliverable.

The summa canisters and preset orifices must arrive at SERAS by March 15, 2012. The flow controllers should have 1/4 inch fittings.

Please submit all reports concerning this project to Misty Barkley at (732) 321-4205 or misty.barkley@lmco.com.

Sincerely,

Vinod Kansal

Vinod Kansal
Analytical Support Chemist
Lockheed Martin / REAC Project

cc. D. Mickunas
S. Thompson
0167 CON
V. Kansal
Subcontracting File
D. Killeen
J. Schaeffer

VOC Compound List for Project 0167

Analyte	Reporting Limit ppbv
Vinyl Chloride	0.030
cis 1,2-Dichloroethene	0.030
Trichloroethene (TCE)	0.030
Tetrachloroethene (PCE)	0.030
1,1-Dichloroethene (1,1-DCE)	0.030
trans-1,2-Dichloroethene	0.030

ERT
SERAS, Edison, NJ
EPA Contract Number: EP-W-09-031

12C0779

CHAIN OF CUSTODY RECORD
Site #: 0-167
Contact Name: Misty Barkley
Contact Phone: 7323214005

No: 0-167-03/22/12-0001

015

Lab: Con-Test
Lab Phone: 4135252332

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Pump #	OrificeID	Stop Pressure	Lab Receipt Pressure
01	167-001	Unit006	IA1	VOCs TO-15 select	Air	3/22/2012	1	SUMMA CANISTER	None	BC1831	BC3356	-9	-8.3
02	167-002	Unit002	IA1	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1290	BC3429	-8	-8
03	167-003	Unit003	IA1	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1447	BC3062	-9	-9.1
04	167-005	Unit005	IA2	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1041	BC3355	-13.5	-13.3

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Analysis	Scott J. Thompson	3/22/12	Paula R	3/24/12	9:51						

SERAS-167-DAR-041712

ERT
SERAS, Edison, NJ
EPA Contract Number: EP-W-09-031

12C0779

~~12C0777~~

CHAIN OF CUSTODY RECORD
Site #: 0-167
Contact Name: Misty Barkley
Contact Phone: 7323214005

No: 0-167-03/22/12-0002

016

Lab: Con-Test
Lab Phone: 4135252332

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Pump #	OrificeID	Stop Pressure	Lab receipt Pressure
05	167-004	Unit005	IA1	VOCs TO-15 Select	Air	3/22/2012	1	SUMMA CANISTER	None	BC1091	BC3100	-9.5	-9.5
06	167-006	Unit004	IA1	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1328	BC3359	-10.5	-10.3
07	167-007	Unit001	IA1	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1506	BC3360	-10	-10.2
08	167-009	Unit007	IA2	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1503	BC3098	-9	-9.4

Rec'd

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Analysis	Scott Thompson	3/22/12	Paul	3/24/12	9:51						

SERAS-167-DAR-041712

ERT
SERAS, Edison, NJ
EPA Contract Number: EP-W-09-031

CHAIN OF CUSTODY RECORD
Site #: 0-167
Contact Name: Misty Barkley
Contact Phone: 7323214005

No: 0-167-03/22/12-0003

017

Lab: Con-Test
Lab Phone: 4135252332

12C0779

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Pump #	OrificeID	Stop Pressure	Lab Receip Pressu
09	167-008	Unit007	IA1	VOCs TO-15 Select	Air	3/22/2012	1	SUMMA CANISTER	None	BC1811	BC3414	-9	-8.7
10	167-010	Unit010	IA1	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1325	BC3434	-10	-10.5
11	167-011	Unit009	IA1	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1275	BC3060	-9.5	-9.9
12	167-012	Unit008	IA1	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1697	BC3345	-10.5	-10.9

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Analysis	Scott [illegible]	3/22/12	Paula [illegible]	3/24/12	9:51						

ERT
SERAS, Edison, NJ
EPA Contract Number: EP-W-09-031

CHAIN OF CUSTODY RECORD
Site #: 0-167
Contact Name: Misty Barkley
Contact Phone: 7323214005

No: 0-167-03/22/12-0004

018

Lab: Con-Test
Lab Phone: 4135252332

12C0778

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Pump #	OrificeID	Stop Pressure	lab Receipt Pressure
13	167-013	Unit011	IA1	VOCs TO-15 Select	Air	3/22/2012	1	SUMMA CANISTER	None	BC1635	BC3305	-8.5	-8.8
14	167-014	Unit012	IA1	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1814	BC3396	-8.5	-8.8
15	167-015	AMB001	OA1	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1496	BC3045	-7.5	-8
16	167-016	AMB001	OA2	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1296	BC3409	-9.5	-9.4

Rec'd

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Analysis	[signature]	3/22/12	Paula [signature]	3/24/12	9:51						

SERAS-167-DAR-041712

ERT
SERAS, Edison, NJ
EPA Contract Number: EP-W-09-031

12C079
~~12C074~~

CHAIN OF CUSTODY RECORD
Site #: 0-167
Contact Name: Misty Barkley
Contact Phone: 7323214005

No: 0-167-03/22/12-0005

019

Lab: Con-Test
Lab Phone: 4135252332

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Pump #	OrificeID	Stop Pressure	Lab Receipt Pressure
017	167-017	AMB002	OA1	VOCs TO-15 Full	Air	3/22/2012	1	SUMMA CANISTER	None	BC1128	BC3416	-9	-9.3
	167-018	BLDG 6	Port 3	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1112	NA	0	-1.8
	167-019	BLDG 6	Port 2	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1830	NA	0	-1.8
	167-020	BLDG 6	Port 1	VOCs TO-15	Air	3/22/2012	1	SUMMA CANISTER	None	BC1817	NA	0	-2

Special Instructions: * SAMPLES 167-018/167-019/167-020 FULL TO-15 Compound List
* Change to order *

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Analysis	[signature]	3/22/12	[signature]	3/24/12	9:51						

SERAS-167-DAR-041712

ERT
SERAS, Edison, NJ
EPA Contract Number: EP-W-09-031

1200779
~~1200776~~

CHAIN OF CUSTODY RECORD
Site #: 0-167
Contact Name: Misty Barkley
Contact Phone: 7323214005

No: 0-167-03/22/12-0006

020

Lab: Con-Test
Lab Phone: 4135252332

Lab #	Sample #	Location	Sub Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Pump #	OrificeID	Stop Pressure	Lab Receipt Pressu
18	167-021	Trip Blank		VOCs TO-15 Select	Air	3/22/2012	1	SUMMA CANISTER	None	BC1858	NA	-30	-29.6

Qc'd

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Analysis	[signature]	3/23/12	Paula [signature]	3/24/12	9:57						

SERAS-167-DAR-041712

APPENDIX C

Final Analytical TAGA Report

Henry's Dry Cleaners Site

Trip Report

May 2012

FINAL ANALYTICAL TAGA REPORT
HENRY'S DRY CLEANERS SITE
LACONIA, NH
APRIL 2012

U.S. EPA Work Assignment No.: SERAS-167
LOCKHEED MARTIN Work Order No.: SER00167
U.S. EPA Contract No.: EP-W-09-031

Submitted to
David Mickunas
U.S. EPA/ERT

Prepared by:
Lockheed Martin/SERAS

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04/05/12
Date

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Danielle McCall

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SERAS Program Manager

4/6/12
Date

SERAS-167-DFA-040312

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3 Summary of Response Factors and Error Bars for 21 March and 22 March 2012

4 Summary of Detection and Quantitation Limit Data for 21 March and 22 March 2012

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1a Unit 6 Floor Plan, HEN004

1b TAGA File Event Summary, File: HEN004 Acquired on 21 March 2012 at 08:32:12, Title: Unit 6 Survey

1c Unit 6 Survey for Trichloroethene and Tetrachloroethene

1d TAGA Target Compound Summary for Unit 6 File: HEN004 Acquired on 21 March 2012 at 08:32:12

2a Unit 2 Floor Plan, HEN005

2b TAGA File Event Summary, File: HEN005 Acquired on 21 March 2012 at 09:08:32, Title: Unit 2 Survey

2c Unit 2 Survey for Trichloroethene and Tetrachloroethene

2d TAGA Target Compound Summary for Unit 2, File: HEN005 Acquired on 21 March 2012 at 09:08:32

3a Unit 3 Floor Plan, HEN006

3b TAGA File Event Summary, File: HEN006 Acquired on 21 March 2012 at 09:34:20, Title: Unit 3 Survey

3c Unit 3 Survey for Trichloroethene and Tetrachloroethene

3d TAGA Target Compound Summary for Unit 3, File: HEN006 Acquired on 21 March 2012 at 09:34:20

4a Unit 5 Floor Plan, HEN007

4b TAGA File Event Summary, File: HEN007 Acquired on 21 March 2012 at 10:14:00, Title: Unit 5 Survey

4c Unit 5 Survey for Trichloroethene and Tetrachloroethene

4d TAGA Target Compound Summary for Unit 5, File: HEN007 Acquired on 21 March 2012 at 10:14:00

5a Unit 4 Floor Plan, HEN008

5b TAGA File Event Summary, File: HEN008 Acquired on 21 March 2012 at 10:42:30, Title: Unit 4 Survey

5c Unit 4 Survey for Trichloroethene and Tetrachloroethene

5d TAGA Target Compound Summary for Unit 4, File: HEN008 Acquired on 21 March 2012 at 10:42:30

6a Unit 1 Floor Plan, HEN009

6b TAGA File Event Summary, File: HEN009 Acquired on 21 March 2012 at 11:22:20, Title: Unit 1 Survey

6c Unit 1 Survey for Trichloroethene and Tetrachloroethene

6d TAGA Target Compound Summary for Unit 1, File: HEN009 Acquired on 21 March 2012 at 11:22:20

7a Unit 7 Floor Plan, HEN013

7b TAGA File Event Summary, File: HEN013 Acquired on 21 March 2012 at 13:31:30, Title: Unit 7 Survey

7c Unit 7 Survey for Trichloroethene and Tetrachloroethene

7d TAGA Target Compound Summary for Unit 7, File: HEN013 Acquired on 21 March 2012 at 13:31:30

8a Unit 10 Floor Plan, HEN014

8b TAGA File Event Summary, File: HEN014 Acquired on 21 March 2012 at 14:04:44, Title: Unit 10 Survey

8c Unit 10 Survey for Trichloroethene and Tetrachloroethene

8d TAGA Target Compound Summary for Unit 10, File: HEN014 Acquired on 21 March 2012 at 14:04:44

9a Unit 9 Floor Plan, HEN015

9b TAGA File Event Summary, File: HEN015 Acquired on 21 March 2012 at 14:25:52, Title: Unit 9 Survey

9c Unit 9 Survey for Trichloroethene and Tetrachloroethene

9d TAGA Target Compound Summary for Unit 9, File: HEN015 Acquired on 21 March 2012 at 14:25:52

10a Unit 8 Floor Plan, HEN016

10b TAGA File Event Summary, File: HEN016 Acquired on 21 March 2012 at 14:42:22, Title: Unit 8 Survey

10c Unit 8 Survey for Trichloroethene and Tetrachloroethene

10d TAGA Target Compound Summary for Unit 8, File: HEN016 Acquired on 21 March 2012 at 14:42:22

11a Unit 11 Floor Plan, HEN017

11b TAGA File Event Summary, File: HEN017 Acquired on 21 March 2012 at 15:26:38, Title: Unit 11 Survey

11c Unit 11 Survey for Trichloroethene and Tetrachloroethene

11d TAGA Target Compound Summary for Unit 11, File: HEN017 Acquired on 21 March 2012 at 15:26:38

12a Unit 12 Floor Plan, HEN020

12b TAGA File Event Summary, File: HEN020 Acquired on 21 March 2012 at 15:48:29, Title: Unit 12 Survey

12c Unit 12 Survey for Trichloroethene and Tetrachloroethene

12d TAGA Target Compound Summary for Unit 12, File: HEN020 Acquired on 21 March 2012 at 15:48:29

13a Unit 13 Floor Plan, HEN022

13b TAGA File Event Summary, File: HEN022 Acquired on 21 March 2012 at 17:00:59, Title: Unit 13 Survey

13c Unit 13 Survey for Trichloroethene and Tetrachloroethene

13d TAGA Target Compound Summary for Unit 13, File: HEN022 Acquired on 21 March 2012 at 17:00:59

14a Mobile Monitoring Path at Henry's Dry Cleaners Site, HEN028

14b TAGA File Event Summary, File: HEN028 Acquired on 22 March 2012 at 13:10:10 UTC, Title: Mobile Monitoring at Henry's Dry Cleaners Site

14c Mobile Monitoring at Henry's Dry Cleaners Site for Trichloroethene and Tetrachloroethene

15a Mobile Monitoring Path at Henry's Dry Cleaners Site, HEN033

15b TAGA File Event Summary, File: HEN033 Acquired on 22 March 2012 at 16:51:33 UTC, Title: Mobile Monitoring at Henry's Dry Cleaners Site

15c Mobile Monitoring at Henry's Dry Cleaners Site for Trichloroethene and Tetrachloroethene

1.0 INTRODUCTION

The Environmental Protection Agency (EPA)/Environmental Response Team (ERT) issued Work Assignment (WA) Number SERAS-167, Henry's Dry Cleaners Site (Site) in Laconia, New Hampshire (NH), to Lockheed Martin under the Scientific, Engineering, Response, and Analytical Services (SERAS) contract. As an element of this WA, SERAS personnel were to conduct target compound monitoring using the ECA Trace Atmospheric Gas Analyzer (TAGA) IIe, to assist EPA Region I in its investigation of residential indoor air quality and offsite impact resulting from the Site.

The TAGA air monitoring events conducted on 21 March and 22 March 2012 were screening in nature. Indoor air and mobile air monitoring for tetrachloroethene (PCE) and trichloroethene (TCE) were performed in accordance with the SERAS Draft Standard Operating Procedure (SOP) # 1711, *Trace Atmospheric Gas Analyzer (TAGA) IIe Operations*. Real-time monitoring for the target compounds was performed using a selected ion technique.

2.0 METHODOLOGY

2.1 Mass Spectrometer/Mass Spectrometer General Theory

The ECA TAGA IIe is based upon the Perkin-Elmer API 365 mass spectrometer/mass spectrometer (MS/MS) and is a direct air-monitoring instrument capable of detecting, in real time, trace levels of many organic compounds in ambient air. The technique of triple quadrupole MS/MS is used to differentiate and quantitate compounds.

The initial step in the MS/MS process involves simultaneous chemical ionization of the compounds present in a sample of ambient air. The ionization produces both positive and negative ions by removing or donating one or more electrons. The chemical ionization is a "soft" ionization technique, which allows ions to be formed with little or no structural fragmentation. These ions are called parent ions. The parent ions with different mass-to-charge (m/z) ratios are separated by the first quadrupole (the first MS of the MS/MS system). The quadrupole scans selected m/z ratios allowing only the parent ions with these ratios to pass through the quadrupole. Parent ions with m/z ratios different from those selected are discriminated electronically and fail to pass through the quadrupole.

The parent ions selected in the first quadrupole are accelerated through a collision cell containing uncharged nitrogen molecules in the second quadrupole. A portion of the parent ions entering the second quadrupole fragments as they collide with the nitrogen molecules. These fragment ions are called daughter ions. This process, in the second quadrupole, is called collision induced dissociation. The daughter ions are separated according to their m/z ratios by the third quadrupole (the second MS of the MS/MS system). The quadrupole scans selected m/z ratios, allowing only the daughter ions with these ratios to pass through the quadrupole. Daughter ions with m/z ratios different from those selected are discriminated electronically and fail to pass through the quadrupole. Daughter ions with the selected m/z ratios are then counted by an electron multiplier. The resulting signals are measured in ion counts per second (icps) for each parent/daughter ion pair selected. The intensity of the icps for each parent/daughter ion pair is directly proportional to the ambient air concentration of the organic compound that produced the ion pair. All of the ions discussed in this report have a single charge. The m/z ratios of all of the ions discussed are equal to the ion masses in atomic mass units (amu). Therefore, the terms parent and daughter masses are synonymous with parent and daughter ion m/z ratios.

2.2 TAGA Procedure

The TAGA was used to analyze indoor air and outdoor ambient air during mobile and stationary monitoring events. Indoor monitoring utilized a 300-foot corrugated Teflon® sampling hose. The proximal end was attached to the TAGA source inlet, while the distal end was taken inside a unit. For mobile monitoring, one end of a 4-foot corrugated Teflon® sampling hose was attached to the

TAGA source inlet, while the other was attached to a glass transfer tube passing through the top of the bus during the monitoring event. In both cases, air was continuously drawn through the hose at a set flow rate and transported to the TAGA source during the monitoring event.

2.2.1 TAGA Mass Calibration

At the beginning of the monitoring period, a gas mixture containing benzene, toluene, xylenes, tetrachloroethene, trichloroethene, 1,1-dichloroethene, and vinyl chloride was introduced by a mass flow controller (MFC) into the sample air flow (SAF). The tuning parameters for the first quadrupole at 30, 78, 106, 130, and 166 amu, and the third quadrupole at 30, 78, 105, 129, and 166 amu were optimized for sensitivity and mass assignment. The peak widths were limited between 0.55 amu and 0.85 amu. The mass assignments were set to the correct values within 0.15 amu.

2.2.2 TAGA Response Factor Measurements

The TAGA was calibrated for the target compounds at the beginning, middle, and end of each day. The calibration system consisted of a regulated gas cylinder containing a gas standard mixture of the target compounds connected to an in-line MFC. The MFC was calibrated with a National Institute of Standards and Technology (NIST) traceable flow rate meter. The gas standard certification is presented in Appendix A. The gas standard containing a known mixture of target compounds, certified by the supplier, was regulated at preset flow rates, and diluted with ambient air. The dilution of the gas standard resulted in known analyte concentrations. The calibration consisted of a zero point and five known concentrations obtained by setting the MFC to 0, 10, 20, 40, 80, and 90 milliliters per minute (mL/min) with the SAF at 1,500 milliliters per second (mL/sec).

The approximate concentration range of standards introduced into the TAGA was between 1 and 20 parts per billion by volume (ppbv). Utilizing the analytes' concentrations, gas flow rates, air sampling flow rates, and response factors (RFs), in units of ion counts per second per part per billion by volume (icps/ppbv), were calculated for each ion pair by using a least-square-fit algorithm to calculate the slope of its curve. The coefficient of correlation was checked for each ion pair's RF to ensure that it was greater than 0.90. The intermediate response factor (IRF) was calculated between pairs of calibrations and used to quantify target compounds in ambient air.

2.2.3 Transport Efficiency

The transport efficiency and residence time for the target compounds through the 300-foot length of corrugated Teflon® sampling hose was determined prior to and at the conclusion of indoor air monitoring activities each day. The transport efficiency was determined by introducing a known concentration of the target compounds into the proximal end and then into the distal end of the sampling hose. The signal intensity of each ion pair for each compound was measured in icps and the percent (%) transport efficiency calculated using the equation below:

$$\%\,transport\ \ efficiency = \frac{signal\ intensity\ at\ the\ distal\ end\ of\ the\ hose}{signal\ intensity\ at\ the\ proximal\ end\ of\ the\ hose}\ x\ 100$$

A transport efficiency of 85% is considered acceptable and results are summarized in Table 1.

The residence time is the interval, in seconds; it takes the air sample to travel the length of the sampling hose. The residence time, which reflects a time difference between the sampling and the instrument response, is incorporated in the offset. The offset, which is

the total number of sequences acquired during the residence time, is applied to the monitoring files (Figures 1b to 15b and Figures 1c to 15c). Therefore, the observations and instrument responses are temporally coordinated.

2.2.4 TAGA Air Monitoring

TAGA monitoring was performed by continuously drawing air through the Teflon® hose at a flow-rate of approximately 1,500 mL/sec. The air was then passed through a glass splitter where the pressure gradient between the mass spectrometer core and the atmosphere causes a sample flow of approximately 10 mL/min into the ionization source through a heated transfer line. The flow into the TAGA source was controlled so that the ionization source pressure was maintained at an optimum value of approximately 1.2 torr. The remaining airflow was drawn through the air pump and vented from the TAGA bus.

Monitoring was performed in the parent/daughter ion-monitoring mode. As monitoring proceeded, the operator pressed letter keys (flags), alphabetically on a computer keyboard, to denote events or locations during the monitoring event. This information was also recorded on an event log sheet. The intensity of each parent/daughter ion pair monitored by the TAGA was recorded in a permanent file on the computer's hard drive. One set of recorded measurements of all the ion pairs is called a sequence.

At the beginning of each unit survey, a one-minute pre-entry ambient data segment was collected. At the operator's signal, the sampler then entered the unit while holding the distal end of the hose at breathing height. The sampler proceeded to each room in the unit where one-minute data segments were collected. After the rooms in the unit were monitored, a one-minute post-exit ambient data segment was collected. Upon completion of the one-minute post-exit ambient data segment, the instrumentation was challenged with the calibration standard, which was introduced at 30 mL/min (approximately 7 ppbv), to verify that the system was functioning properly.

2.3 Global Positioning System (GPS) and Tracking

The mobile laboratory is equipped with a Trimble ProXRS GPS that is linked to a personal computer equipped with a geographic information system (GIS) which maps in real-time the mobile laboratory's position. The display illustrates the path taken during each monitoring period, allowing the personnel on board to relate the real-time monitoring data produced by on-board instrumentation to the physical location and potential sources. The instrument and computer clocks in the mobile laboratory are synchronized with the satellite data from the GPS, so the monitoring data can be directly associated with the position of the mobile laboratory as indicated by the GPS system at any time during any monitoring period. The mobile monitoring start times for the TAGA analytical runs and the GPS data were synchronized to Universal Coordinated Time (UTC). Local Standard Time (LST) has a four hour lag behind UTC.

2.4 Meteorological Monitoring

United States Department of Commerce, National Oceanic and Atmospheric Administration, National Climatic Data Center provided the meteorological data for 17 March 2012 to 24 March 2012. Data were collected from the Laconia Municipal Airport in Laconia, NH. The airport is located approximately 4.6 miles northeast of the Henry's Dry Cleaners Site. Meteorological data, such as wind speed, wind direction, and rainfall, are summarized in Table 2 for the periods during which monitoring occurred. The compiled meteorological data are presented in Appendix B. The reported data for rainfall is an average of the data recorded during the hour preceding the time recorded in the table. The reported meteorological data for wind speed and direction represent a five-minute average collected prior to the time recorded in the table. Because of the distance of the meteorological monitoring location from the study location and the short averaging period, care should be exercised in relating meteorological conditions existing at the Site.

3.0 TAGA AIR MONITORING RESULTS

The TAGA was used to survey indoor air in residential and commercial units in the vicinity of the Site. Mobile monitoring survey was also performed following a path around the Site.

3.1 Unit Surveys

Figures 1a through 13a, present the approximate floor plans of each unit. The monitoring locations marked by letters are the "flags" that the TAGA operator placed into the file. These "flags" mark events and are carried through the rest of the data presentation. The SUMMA® canister sampling locations are also depicted in these floor plans.

3.2 Mobile Monitoring Paths

Figures 14a to 15a present the monitoring paths taken by the TAGA mobile laboratory as it traveled in the vicinity of the Site. The maps, representing the monitoring paths, are marked by letters. These letters are the “flags” that the TAGA operator placed into the file. These "flags" mark events and are carried through the rest of the data presentation.

3.3 TAGA File Event Summaries

Figures 1b through 15b present the TAGA file event summaries. These are the observations made during the file acquisition by the TAGA operator, along with the times from the TAGA file and the letter "flags" used to mark the data, which are recorded by the TAGA computer.

3.4 Graphical Presentations

Figures 1c through 15c are the graphical representations of the TAGA files. A graph of each target compound concentration is presented with ppbv plotted on the vertical axis, and time into the acquisition, in minutes, on the horizontal axis. The target compound concentration was calculated by averaging the concentrations obtained from the ion pairs that were monitored for each target compound. There are two horizontal lines on each graph. The lower line is set at the detection limit (DL) for the compound. The higher line is set at the concentration equal to the quantitation limit (QL) for the target compound. When high concentrations are represented, the lower DL line may not be readily discerned. Transient, momentary spikes above the QL line are occasionally observed. These spikes, electronic in nature, do not affect average concentrations. They may be distinguished from elevated concentrations because the spikes are only present for one sequence and are often only present for one ion pair of the monitored compound.

3.5 TAGA Target Compound Summaries

The TAGA target compound summaries are presented in Figures 1d through 13d. These figures contain the concentrations of the target compounds averaged over time, at the various locations logged into the TAGA file event summaries.

4.0 DISCUSSION OF RESULTS

The TAGA target compound summaries are represented in Figures 1d through 13d. During each survey, a one-minute average was measured in each room, or at various locations within a room. Only the highest average concentrations above the QL are listed below.

During each mobile monitoring period, the TAGA mobile laboratory monitored continuously while moving along the roads in the vicinity of the Site. Only the highest instantaneous concentrations above the QL are listed below.

4.1 Unit 6 Survey, HEN004

Unit 6 was surveyed on 21 March 2012 at 08:32:12 and is represented in Figures 1a through 1d. The average wind speed and direction at the airport for the five-minute period ending at 08:35 were 7 miles per hour (mph) from 250 degrees. There was no precipitation during the preceding hour. The average concentration of trichloroethene was not detected above its quantitation limit at any of the monitoring locations. The highest average concentration of tetrachloroethene was 0.34 ppbv in the center of the unit between flags D and E.

4.2 Unit 2 Survey, HEN005

Unit 2 was surveyed on 21 March 2012 at 09:08:32 and is represented in Figures 2a through 2d. The average wind speed and direction at the airport for the five-minute period ending at 09:15 were 7 mph from 250 degrees. There was no precipitation during the preceding hour. The average concentrations of trichloroethene and tetrachloroethene were not detected above their quantitation limits at any of the monitoring locations.

4.3 Unit 3 Survey, HEN006

Unit 3 was surveyed on 21 March 2012 at 09:34:20 and is represented in Figures 3a through 3d. The average wind speed and direction at the airport for the five-minute period ending at 09:35 were 8 mph from 250 degrees. There was no precipitation during the preceding hour. The average concentrations of trichloroethene and tetrachloroethene were not detected above their quantitation limits at any of the monitoring locations.

4.4 Unit 5 Survey, HEN007

Unit 5 was surveyed on 21 March 2012 at 10:14:00 and is represented in Figures 4a through 4d. The average wind speed and direction at the airport for the five-minute period ending at 10:35 were 9 mph from 240 degrees. There was no precipitation during the preceding hour. The average concentrations of trichloroethene and tetrachloroethene were not detected above their quantitation limits at any of the monitoring locations.

4.5 Unit 4 Survey, HEN008

Unit 4 was surveyed on 21 March 2012 at 10:42:30 and is represented in Figures 5a through 5d. The average wind speed and direction at the airport for the five-minute period ending at 10:55 were 7 mph from 240 degrees. There was no precipitation during the preceding hour. The average concentrations of trichloroethene and tetrachloroethene were not detected above their quantitation limits at any of the monitoring locations.

4.6 Unit 1 Survey, HEN009

Unit 1 was surveyed on 21 March 2012 at 11:22:20 and is represented in Figures 6a through 6d. The average wind speed and direction at the airport for the five-minute period ending at 11:35 were 8 mph from 210 degrees. There was no precipitation during the preceding hour. The average concentrations of trichloroethene and tetrachloroethene were not detected above their quantitation limits at any of the monitoring locations.

4.7 Unit 7 Survey, HEN013

Unit 7 was surveyed on 21 March 2012 at 13:31:30 and is represented in Figures 7a through 7d. The average wind speed and direction at the airport for the five-minute period ending at 13:35 were 5 mph from 210 degrees. There was no precipitation during the preceding hour. The average concentration of trichloroethene was not detected above its quantitation limit at any of the monitoring locations. The highest average concentration of tetrachloroethene was 4.2 ppbv in the

bedroom one closet between flags R and S.

4.8 Unit 10 Survey, HEN014

Unit 10 was surveyed on 21 March 2012 at 14:04:44 and is represented in Figures 8a through 8d. The average wind speed and direction at the airport for the five-minute period ending at 14:15 were 6 mph from 170 degrees. There was no precipitation during the preceding hour. The average concentration of trichloroethene was not detected above its quantitation limit at any of the monitoring locations. The highest average concentration of tetrachloroethene was 0.20 ppbv in the living room between flags E and F.

4.9 Unit 9 Survey, HEN015

Unit 9 was surveyed on 21 March 2012 at 14:25:52 and is represented in Figures 9a through 9d. The average wind speed and direction at the airport for the five-minute period ending at 14:35 were 9 mph from 220 degrees. There was no precipitation during the preceding hour. The average concentrations of trichloroethene and tetrachloroethene were not detected above their quantitation limits at any of the monitoring locations.

4.10 Unit 8 Survey, HEN016

Unit 8 was surveyed on 21 March 2012 at 14:42:22 and is represented in Figures 10a through 10d. The average wind speed and direction at the airport for the five-minute period ending at 14:55 were 8 mph from 230 degrees. There was no precipitation during the preceding hour. The average concentration of trichloroethene was not detected above its quantitation limit at any of the monitoring locations. The highest average concentration of tetrachloroethene was 0.82 ppbv in bedroom one between flags Q and R.

4.11 Unit 11 Survey, HEN017

Unit 11 was surveyed on 21 March 2012 at 15:26:38 and is represented in Figures 11a through 11d. The average wind speed and direction at the airport for the five-minute period ending at 15:35 were 0 mph from 0 degrees. There was no precipitation during the preceding hour. The average concentrations of trichloroethene and tetrachloroethene were not detected above their quantitation limits at any of the monitoring locations.

4.12 Unit 12 Survey, HEN020

Unit 12 was surveyed on 21 March 2012 at 15:48:29 and is represented in Figures 12a through 12d. The average wind speed and direction at the airport for the five-minute period ending at 15:35 were 0 mph from 0 degrees. There was no precipitation during the preceding hour. The average concentrations of trichloroethene and tetrachloroethene were not detected above their quantitation limits at any of the monitoring locations.

4.13 Unit 13 Survey, HEN022

Unit 13 was surveyed on 21 March 2012 at 17:00:59 and is represented in Figures 13a through 13d. The average wind speed and direction at the airport for the five-minute period ending at 17:15 were 6 mph from 250 degrees. There was no precipitation during the preceding hour. The average concentrations of trichloroethene and tetrachloroethene were not detected above their quantitation limits at any of the monitoring locations.

4.14 Mobile Monitoring at Henry's Dry Cleaners Site, HEN028

Mobile monitoring was performed on 22 March 2012 at 13:10:00 (UTC) and is represented in Figures 14a through 14c, starting at location A and ending at location T along the path depicted in

Figure 14a. The average wind speed and direction at the airport for the five-minute period ending at 09:15 Local Standard Time (LST) were 7 mph from 230 degrees. There was no precipitation during the preceding hour. The instantaneous concentration of trichloroethene was not detected above its quantitation limit. The highest instantaneous concentrations of tetrachloroethene detected were 9.3 ppbv at 11.979 minutes on Pleasant Street between flags F and G, 10 ppbv at 21.003 minutes on Pleasant Street between flags K and L, and 17 ppbv at 24.197 minutes on Pleasant Street between flags O and P.

4.15 Mobile Monitoring at Henry's Dry Cleaners Site, HEN033

Mobile monitoring was performed on 22 March 2012 at 16:51:33 (UTC) and is represented in Figures 15a through 15c, starting at location A and ending at location P along the path depicted in Figure 15a. The average wind speed and direction at the airport for the five-minute period ending at 12:55 (LST) were 9 mph from 260 degrees. There was no precipitation during the preceding hour. The instantaneous concentration of trichloroethene was not detected above its quantitation limit. The highest instantaneous concentration of tetrachloroethene detected was 0.42 ppbv at 13.838 minutes on Pleasant Street between flags G and H.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

The compound parent/daughter ion pairs used are listed below.

Compound	Parent Ion Mass	Daughter Ion Mass
Trichloroethene	130	95
Trichloroethene	132	95
Trichloroethene	132	97
Tetrachloroethene	164	129
Tetrachloroethene	166	129
Tetrachloroethene	166	131

Tables 3 and 4 documents the RFs and IRFs generated during the calibration procedure for the individual ion pairs. Intermediate Response Factors were used to quantitate the ion pair concentrations.

The summaries of detection and quantitation limit data for the monitoring periods (Sections 5.3 and 5.4 and Table 4) document the concentration, in ppbv, required for a compound's ion pair to be considered detectable and quantifiable during the specified monitoring period. The DL is defined as three times the standard deviation of the concentration for a compound's ion pair measured in an ambient air sample. The QL is defined as 10 times the standard deviation of the concentration for the same conditions. The detection and quantitation limits for a compound result from averaging the appropriate detection and quantitation limits of the compound's ion pairs.

5.1 Intermediate Response Factor for Ion Pairs

Response factors were generated from two calibration events, as described in the procedure (Section 2.2.2.). Table 3 contains the RFs in units of icps/ppbv. The initial and final RFs were used to calculate the IRFs, which were used to calculate the reported concentration results.

The following equation was used to calculate the IRFs found in Tables 3 and 4:

$$\mathrm{IRF} = \frac{2(\mathrm{RF}_1 \times \mathrm{RF}_2)}{(\mathrm{RF}_1 + \mathrm{RF}_2)}$$

where:

IRF = Intermediate response factor (icps/ppbv)
RF_1 = The RF for an ion pair measured during the first calibration event (icps/ppbv)
RF_2 = The RF for the same ion pair measured during the second calibration event (icps/ppbv)

For example, the entry for the 166/129 ion pair of tetrachloroethene from Table 3 for files HEN012 and HEN023, 21 March 2012 is:

RF_1 = 438.54 icps/ppbv
RF_2 = 514.78 icps/ppbv

therefore,

$$\text{IRF} = \frac{2(438.54 \times 514.78)}{(438.54 + 514.78)} = \frac{451{,}503.24}{953.32} = 473.61 \text{ icps/ppbv}$$

The result, 473.61 icps/ppbv, is the IRF reported in Table 3 and used in Table 4.

5.2 Error Bars

The potential maximum concentration percent deviations for each target compound are presented in Table 3 and are called "error bars" for simplicity. They represent the potential bias in the concentration due to changes in the sensitivity of the TAGA instrument. Errors bars were calculated using the following equation:

$$\text{error bar} = \frac{|RF_1 - RF_2|}{(RF_1 + RF_2)} \times 100$$

where:

error bar = Maximum concentration percent deviation
RF_1 = The RF for an ion pair measured during the first calibration event (icps/ppbv)
RF_2 = The RF for the same ion pair measured during the second calibration event (icps/ppbv)

For example, the entry for the 166/129 ion pair of tetrachloroethene from Table 3 for files HEN012 and HEN023, 21 March 2012 is:

RF_1 = 438.54 icps/ppbv
RF_2 = 514.78 icps/ppbv

$$\text{error bar} = \frac{|438.54 - 514.78|}{(438.54 + 514.78)} \times 100 = 7.997\%$$

The % error bar calculated for the 166/129 ion pair of tetrachloroethene is 8.0% for files HEN012 and HEN023, 21 March 2012.

The above calculation was repeated for each ion pair. The error bars for each compound's ions were averaged to give a single value for the compound. This averaged error bar can be applied to the samples analyzed between the two calibrations of the monitoring period.

5.3 Ion Pair Detection and Quantitation Limits

The DLs and QLs were calculated using the standard deviation (SD) of the compound's ion pair intensity measured in an ambient air sample and its RF. The SD reflects the variability of the instrument's response to the ambient air sample.

The following equation was used to calculate the DLs found in Table 4:

$$DL = \frac{3 \times SD}{IRF}$$

where:

DL = Detection limit for an ion pair (ppbv)
SD = Standard deviation of the ion intensity measured in an ambient air sample (icps)
IRF = Intermediate response factor for an ion pair (icps/ppbv)

For example, the entry for the 166/129 ion pair of tetrachloroethene from Table 4 for files HEN012 and HEN023, 21 March 2012 is:

SD = 12.659 icps
IRF = 473.61 icps/ppbv

$$DL = \frac{3 \times 12.659}{473.61} = 0.0802\,\text{ppbv}$$

The following equation was used to calculate the QLs found in Table 4:

$$QL = \frac{10 \times SD}{IRF}$$

where:

QL = Quantitation limit concentration for an ion pair (ppbv)
SD = Standard deviation of the ion intensity measured in an ambient air sample (icps)
IRF = Intermediate response factor for an ion pair (icps/ppbv)

For example, the entry for the 166/129 ion pair of tetrachloroethene from Table 4 for files HEN012 and HEN023, 21 March 2012 is:

SD = 12.659 icps
IRF = 473.61 icps/ppbv

$$QL = \frac{10 \times 12.659}{473.61} = 0.267\,\text{ppbv}$$

5.4 Compound Detection and Quantitation Limits

Averaging the respective DLs and QLs of the target compound's ion pairs found in Table 4 generated the DLs and QLs found in Table 4.

The following equation was used to calculate the compound's DL:

$$DL_c = \frac{DL_1 + DL_2 + \ldots + DL_n}{n}$$

where:

DL_c = Detection limit for a compound (ppbv)
DL_1 = Detection limit for the first ion pair (ppbv)
DL_2 = Detection limit for the second ion pair (ppbv)
DL_n = Detection limit for the nth ion pair (ppbv)
n = Number of ion pairs to be averaged

For example, the entry for the 164/129, 166/129, and 166/131 ion pairs of tetrachloroethene from Table 4 for files HEN012 and HEN023, 21 March 2012 is:

$$DL_c = \frac{0.0408 + 0.0802 + 0.0367}{3} = \frac{0.1577}{3} = 0.0525\text{ppbv}$$

This result, 0.0525 ppbv, rounded to 0.053 ppbv is the DL for tetrachloroethene found in Table 4.

The following equation was used to calculate the compound's QL:

$$QL_c = \frac{QL_1 + QL_2 + \ldots QL_n}{n}$$

where:

QL_c = Quantitation limit for a compound (ppbv)
QL_1 = Quantitation limit for the first ion pair (ppbv)
QL_2 = Quantitation limit for the second ion pair (ppbv)
QL_n = Quantitation limit for the nth ion pair (ppbv)
n = Number of ion pairs to be averaged

For example, the entry for the 164/129, 166/129, and 166/131 ion pairs of tetrachloroethene from Table 4 for files HEN012 and HEN023, 21 March 2012 is:

$$QL_c = \frac{0.136 + 0.267 + 0.122}{3} = \frac{0.525}{3} = 0.175\text{ppbv}$$

This result, 0.175 ppbv, rounded to 0.18 ppbv is the DL for tetrachloroethene found in Table 4.

TABLES

TABLE 1
Summary of Transport Efficiencies Measured on 21 March 2012
Henry's Dry Cleaners Site
Laconia, New Hampshire
April 2012

Transport Efficiency for 21 March 2012 06:58:36 File: HEN003				
	Start Sequence:	300	938	
	End Sequence:	407	1040	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Trichloroethene	130/95	14200.4	13972.7	98.4
Trichloroethene	132/95	4513.6	4450.3	98.6
Trichloroethene	132/97	8805.2	8767.5	99.6
			Average Trichloroethene Transport Efficiency:	98.9
Tetrachloroethene	164/129	9266.8	9155.8	98.8
Tetrachloroethene	166/129	3242.4	3220.0	99.3
Tetrachloroethene	166/131	9290.2	9191.7	98.9
			Average Tetrachloroethene Transport Efficiency:	99.0

Transport Efficiency for 21 March 2012 02:29:11 File: HEN025				
	Start Sequence:	200	600	
	End Sequence:	300	700	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Trichloroethene	130/95	16859.6	16829.8	99.8
Trichloroethene	132/95	5232.4	5254.9	100.4
Trichloroethene	132/97	10219.4	10320.8	101.0
			Average Trichloroethene Transport Efficiency:	100.4
Tetrachloroethene	164/129	9161.9	9180.9	100.2
Tetrachloroethene	166/129	3398.2	3372.0	99.2
Tetrachloroethene	166/131	9626.9	9596.5	99.7
			Average Tetrachloroethene Transport Efficiency:	99.7

PM/DM = Parent mass/Daughter mass
icps = Ion counts per second
% = Percent

TABLE 2
Summary of Meteorological Conditions during Monitoring, 21 March and 22 March 2012
Henry's Dry Cleaners Site
Laconia, New Hampshire
April 2012

File	Location	Date	Start Time	Wind Speed (mph)	Wind Direction (degrees)	Rainfall (inches)
HEN004	Unit 6	3/21/2012	08:32:12	7	250	-
HEN005	Unit 2	3/21/2012	09:08:32	7	250	-
HEN006	Unit 3	3/21/2012	09:34:20	8	250	-
HEN007	Unit 5	3/21/2012	10:14:00	9	240	-
HEN008	Unit 4	3/21/2012	10:42:30	7	240	-
HEN009	Unit 1	3/21/2012	11:22:20	8	210	-
HEN013	Unit 7	3/21/2012	13:31:30	5	210	-
HEN014	Unit 10	3/21/2012	14:04:44	6	170	-
HEN015	Unit 9	3/21/2012	14:25:52	9	220	-
HEN016	Unit 8	3/21/2012	14:42:22	8	230	-
HEN017	Unit 11	3/21/2012	15:26:38	0	0	-
HEN020	Unit 12	3/21/2012	15:48:29	0	0	-
HEN022	Unit 13	3/21/2012	17:00:59	6	250	-
HEN028	Mobile	3/22/2012	13:10:10 UTC	7	230	-
HEN033	Mobile	3/22/2012	16:51:33 UTC	9	260	-

Note: The wind direction is the direction from which the wind is blowing
mph = mile per hour
\- = no precipitation
UTC = Universal Coordinated Time. (Local Standard Time lags four hours behind UTC)

TABLE 3
Summary of Response Factors and Error Bars for 21 March and 22 March 2012
Henry's Dry Cleaners Site
Laconia, New Hampshire
April 2012

Calibration Files: HEN002 and HEN010 on 21 March 2012
Used for Survey Files: HEN004 to HEN009

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Trichloroethene	130/95	2098.2	1948.1	2020.4	3.71
Trichloroethene	132/95	682.74	621.58	650.73	4.69
Trichloroethene	132/97	1333.6	1217.4	1272.8	4.55
				Average:	4.3
Tetrachloroethene	164/129	1481.9	1256.6	1360.0	8.23
Tetrachloroethene	166/129	507.58	439.38	471.03	7.20
Tetrachloroethene	166/131	1447.7	1254.9	1344.4	7.14
				Average:	7.5

Calibration Files: HEN012 and HEN023 on 21 March 2012
Used for Survey Files: HEN013 to HEN017, HEN020, HEN022

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Trichloroethene	130/95	1969.0	2465.3	2189.4	11.2
Trichloroethene	132/95	624.99	777.44	692.93	10.9
Trichloroethene	132/97	1223.5	1527.9	1358.9	11.1
				Average:	11.
Tetrachloroethene	164/129	1248.0	1457.4	1344.6	7.74
Tetrachloroethene	166/129	438.54	514.78	473.61	8.00
Tetrachloroethene	166/131	1249.2	1463.8	1348.0	7.91
				Average:	7.9

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 3 continued
Summary of Response Factors and Error Bars for 21 March and 22 March 2012
Henry's Dry Cleaners Site
Laconia, New Hampshire
April 2012

Calibration Files: HEN026 and HEN034 on 22 March 2012
Used for Survey Files: HEN028 and HEN033

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Trichloroethene	130/95	2437.1	2411.3	2424.2	0.531
Trichloroethene	132/95	762.21	744.33	753.16	1.19
Trichloroethene	132/97	1498.3	1462.2	1480.0	1.22
				Average:	0.98
Tetrachloroethene	164/129	1428.8	1357.0	1392.0	2.58
Tetrachloroethene	166/129	520.70	504.20	512.32	1.61
Tetrachloroethene	166/131	1493.4	1441.8	1467.1	1.76
				Average:	2.0

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 4
Summary of Detection and Quantitation Limit Data for 21 March and 22 March 2012
Henry's Dry Cleaners Site
Laconia, New Hampshire
April 2012

Calibration Files: HEN002 and HEN010 on 21 March 2012
Used for Survey Files: HEN004 to HEN009

Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Trichloroethene	130/95	2020.4	29.312	0.0435	0.145
Trichloroethene	132/95	650.73	18.880	0.0870	0.290
Trichloroethene	132/97	1272.8	26.988	0.0636	0.212
			Average:	0.065	0.22
Tetrachloroethene	164/129	1360.0	21.536	0.0475	0.158
Tetrachloroethene	166/129	471.03	17.346	0.110	0.368
Tetrachloroethene	166/131	1344.4	24.256	0.0541	0.180
			Average:	0.071	0.24

Calibration Files: HEN012 and HEN023 on 21 March 2012
Used for Survey Files: HEN013 to HEN017, HEN020, HEN022

Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Trichloroethene	130/95	2189.4	12.052	0.0165	0.0550
Trichloroethene	132/95	692.93	12.438	0.0538	0.179
Trichloroethene	132/97	1358.9	14.890	0.0329	0.110
			Average:	0.034	0.11
Tetrachloroethene	164/129	1344.6	18.274	0.0408	0.136
Tetrachloroethene	166/129	473.61	12.659	0.0802	0.267
Tetrachloroethene	166/131	1348.0	16.474	0.0367	0.122
			Average:	0.053	0.18

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 4 continued
Summary of Detection and Quantitation Limit Data for 21 March and 22 March 2012
Henry's Dry Cleaners Site
Laconia, New Hampshire
April 2012

Calibration Files: HEN026 and HEN034 on 22 March 2012
Used for Survey Files: HEN028 and HEN033

Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Trichloroethene	130/95	2424.2	14.544	0.0180	0.0600
Trichloroethene	132/95	753.16	13.367	0.0532	0.177
Trichloroethene	132/97	1480.0	15.610	0.0316	0.105
			Average:	0.034	0.11
Tetrachloroethene	164/129	1392.0	19.801	0.0427	0.142
Tetrachloroethene	166/129	512.32	13.097	0.0767	0.256
Tetrachloroethene	166/131	1467.1	21.005	0.0430	0.143
			Average:	0.054	0.18

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

FIGURES

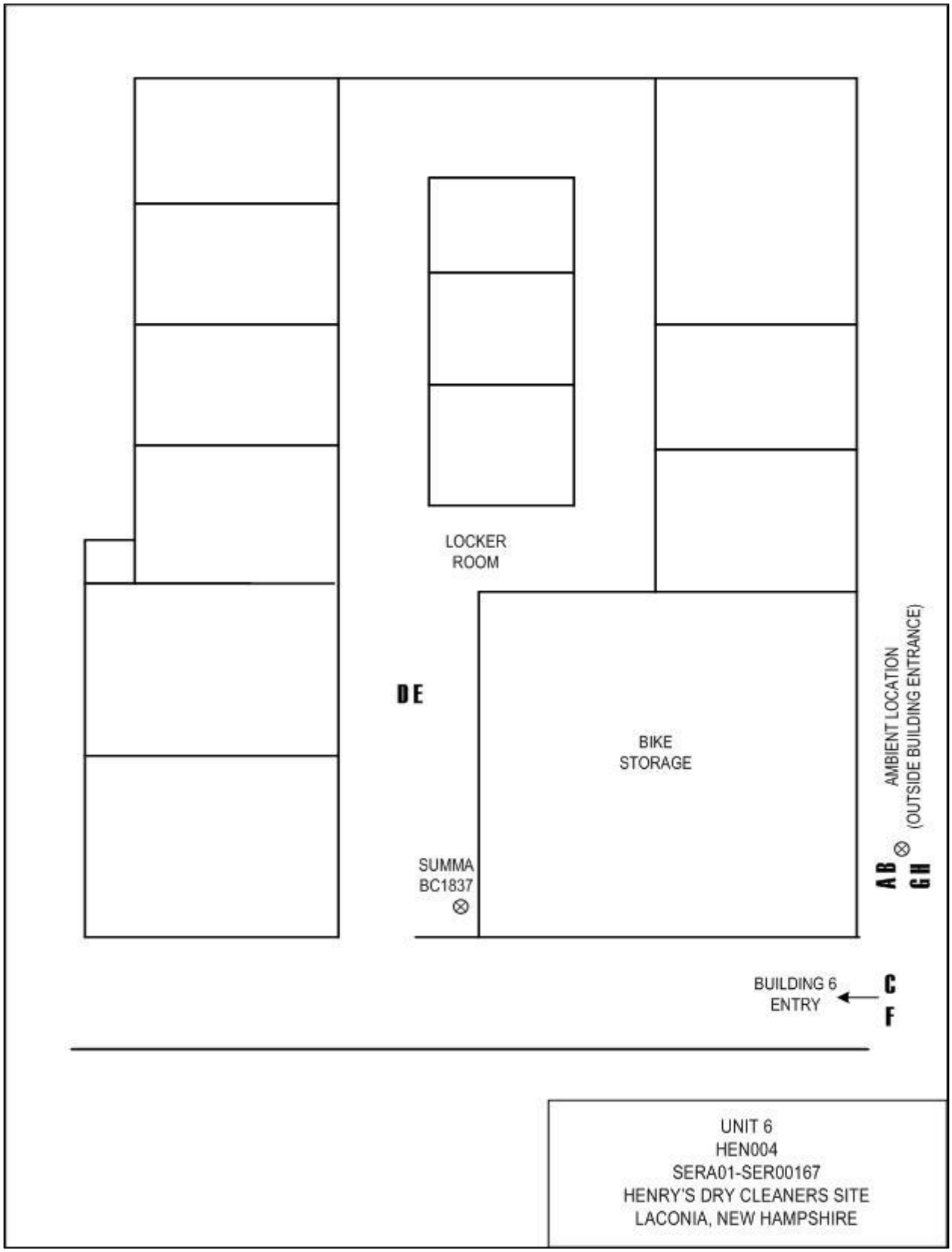
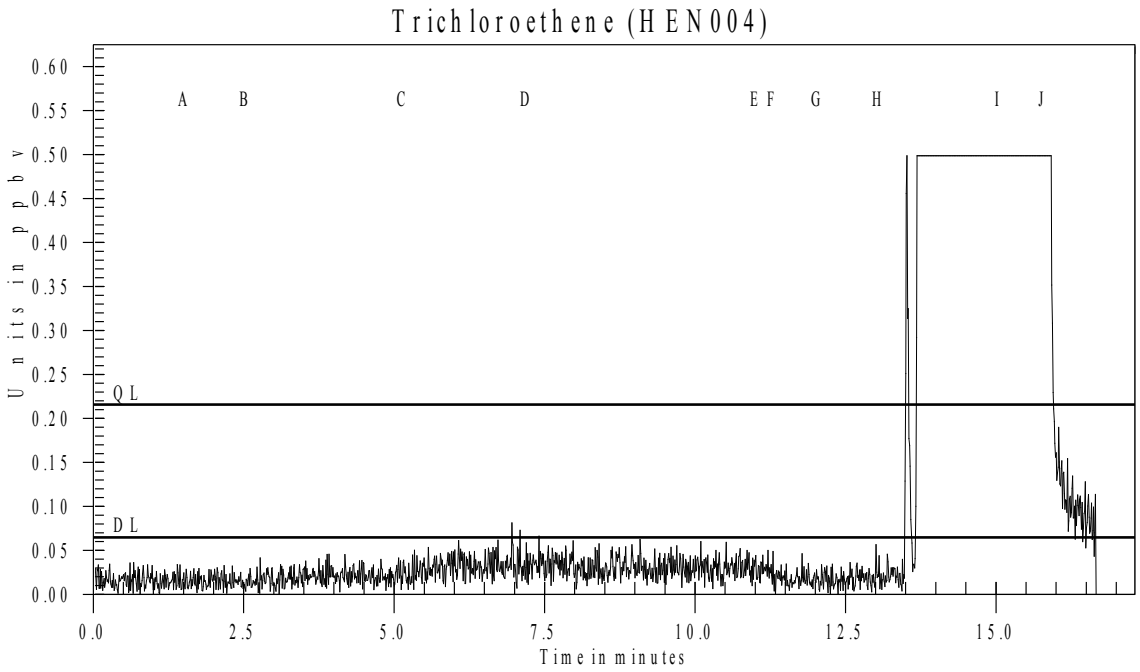


Figure 1a Unit 6 Floor Plan, HEN004

Figure 1b

TAGA File Event Summary
File: HEN004 Acquired on 21 March 2012 at 08:32:12
Title: Unit 6 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.4	135	Start of the pre-entry ambient
B	2.4	232	End of the pre-entry ambient
C	5.0	481	Entering Building 6
D	7.1	676	Start center of Unit 6
E	10.9	1040	End center of Unit 6
F	11.2	1067	Exiting Building 6
G	11.9	1136	Start of the post-exit ambient
H	12.9	1233	End of the post-exit ambient
I	15.0	1427	Start of the 30 mL/min spike
J	15.7	1496	End of the 30 mL/min spike



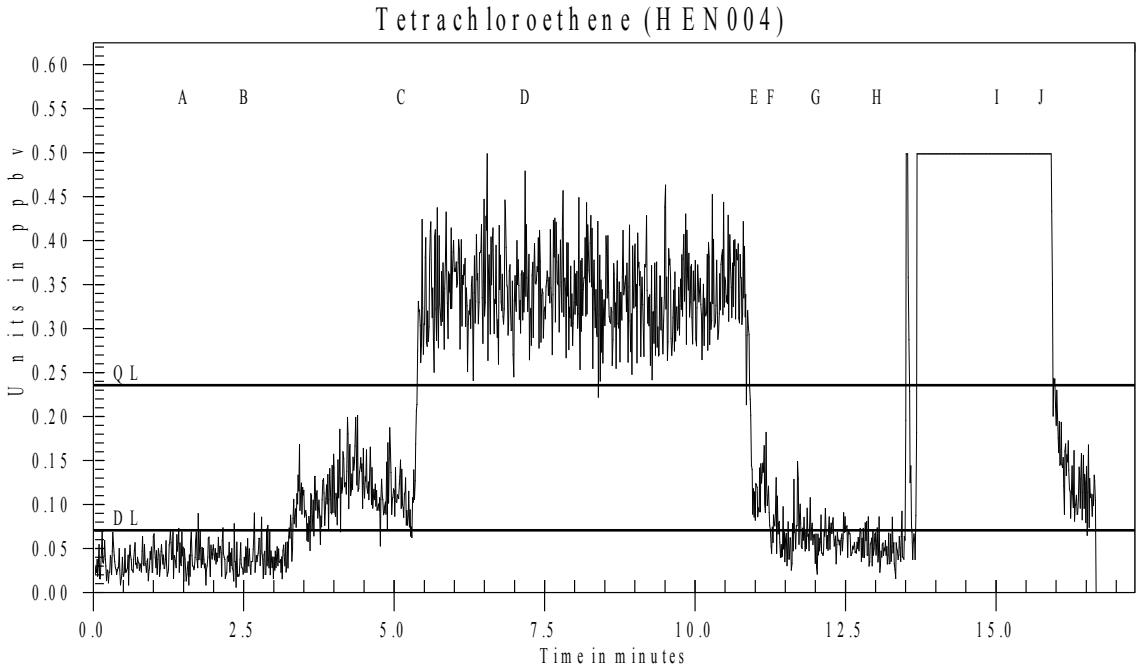


Figure 1c Unit 6 Survey for Trichloroethene and Tetrachloroethene

Figure 1d

TAGA Target Compound Summary for Unit 6
File: HEN004 Acquired on 21 March 2012 at 08:32:12

		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.065	0.071
	Quantitation Limits - QL:	0.22	0.24
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.065	DL=0.071
D - E	Center of unit 6	DL=0.065	0.34
G - H	Post-exit ambient	DL=0.065	DL=0.071
I - J	30 mL/min spike	6.8	6.6

Concentrations are given in parts per billion by volume

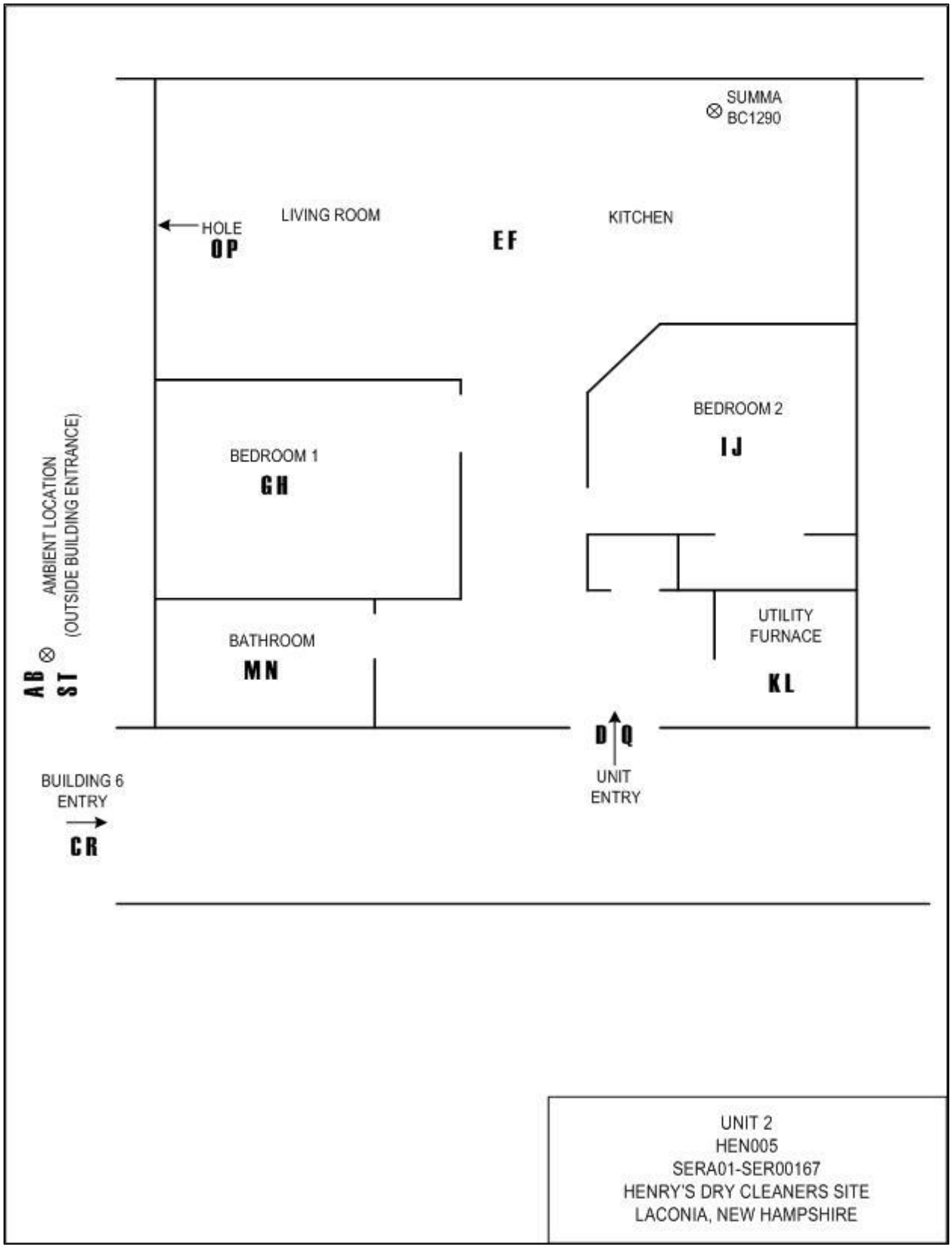


Figure 2a Unit 2 Floor Plan, HEN005

Figure 2b

TAGA File Event Summary
File: HEN005 Acquired on 21 March 2012 at 09:08:32
Title: Unit 2 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.5	148	Start of the pre-entry ambient
B	2.6	245	End of the pre-entry ambient
C	3.7	354	Entering Building 6
D	4.2	403	Entering Unit 2
E	4.6	438	Start center of the unit
F	5.6	534	End center of the unit
G	6.3	599	Start of bedroom one
H	7.3	695	End of bedroom one
I	7.7	733	Start of bedroom two
J	8.7	832	End of bedroom two
K	9.1	868	Start of the utility/furnace room
L	10.2	967	End of the utility/furnace room
M	10.4	995	Start of the bathroom
N	11.4	1089	End of the bathroom
O	12.2	1159	Start of hole in the wall of the kitchen/living room
P	13.2	1255	End of hole in the wall of the kitchen/living room
Q	13.7	1308	Exiting the unit
R	14.4	1373	Exiting Building 6
S	15.7	1496	Start of the post-exit ambient
T	16.8	1601	End of the post-exit ambient
U	18.8	1787	Start of the 30 mL/min spike
V	19.3	1841	End of the 30 mL/min spike

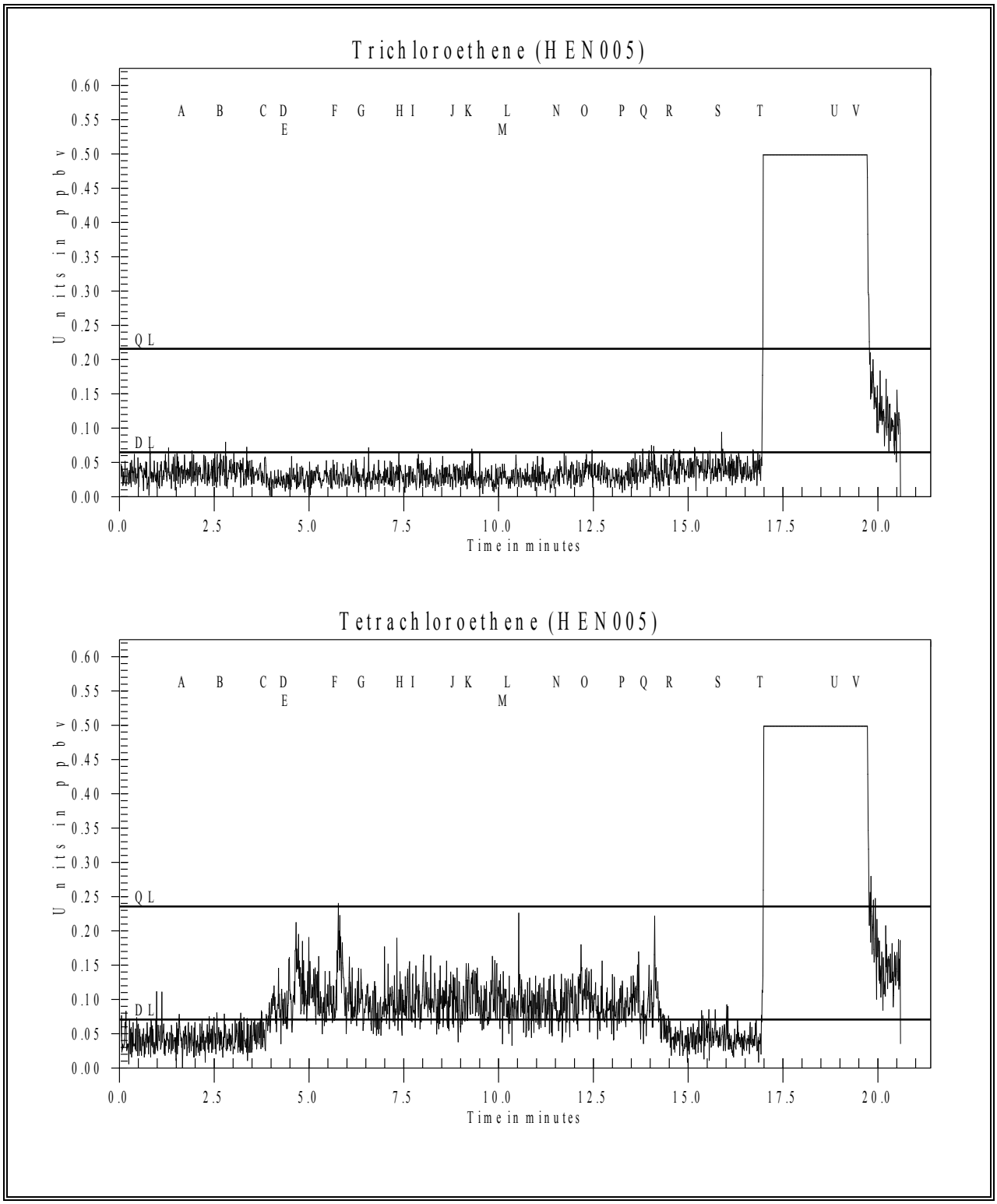


Figure 2c Unit 2 Survey for Trichloroethene and Tetrachloroethene

Figure 2d

TAGA Target Compound Summary for Unit 2
File: HEN005 Acquired on 21 March 2012 at 09:08:32

		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.065	0.071
	Quantitation Limits - QL:	0.22	0.24
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.065	DL=0.071
E - F	Center of the unit	DL=0.065	0.11J
G - H	Bedroom one	DL=0.065	0.093J
I - J	Bedroom two	DL=0.065	0.10J
K - L	Utility/furnace room	DL=0.065	0.10J
M - N	Bathroom	DL=0.065	0.093J
O - P	Hole in the wall of the kitchen/living room	DL=0.065	0.093J
S - T	Post-exit ambient	DL=0.065	DL=0.071
U - V	30 mL/min spike	7.0	6.7

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

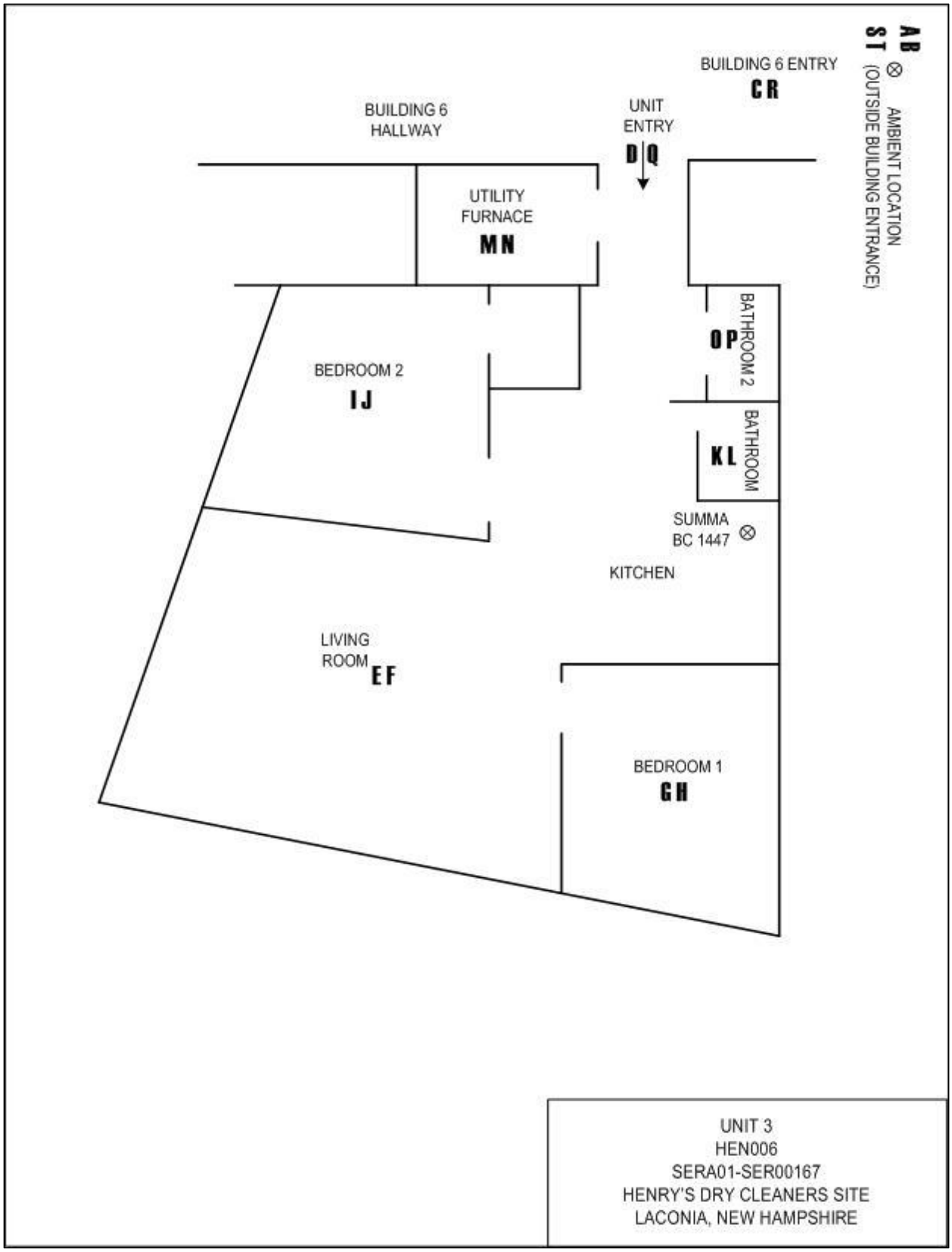


Figure 3a Unit 3 Floor Plan, HEN006

Figure 3b

TAGA File Event Summary
File: HEN006 Acquired on 21 March 2012 at 09:34:20
Title: Unit 3 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.5	142	Start of the pre-entry ambient
B	2.5	238	End of the pre-entry ambient
C	3.2	310	Entering Building 6
D	5.7	546	Entering Unit 3
E	6.5	622	Start center of the living room
F	7.5	719	End center of the living room
G	8.1	775	Start of bedroom one
H	9.1	871	End of bedroom one
I	9.6	914	Start of bedroom two
J	10.6	1009	End of bedroom two
K	10.9	1038	Start of the bathroom
L	11.9	1133	End of the bathroom
M	12.5	1189	Start of the utility/furnace room
N	13.5	1284	End of the utility/furnace room
O	13.8	1316	Start of bathroom two
P	14.8	1412	End of bathroom two
Q	15.2	1446	Exiting the unit
R	15.6	1490	Exiting Building 6
S	16.9	1608	Start of the post-exit ambient
T	17.9	1707	End of the post-exit ambient
U	20.5	1953	Start of the 30 mL/min spike
V	21.3	2026	End of the 30 mL/min spike

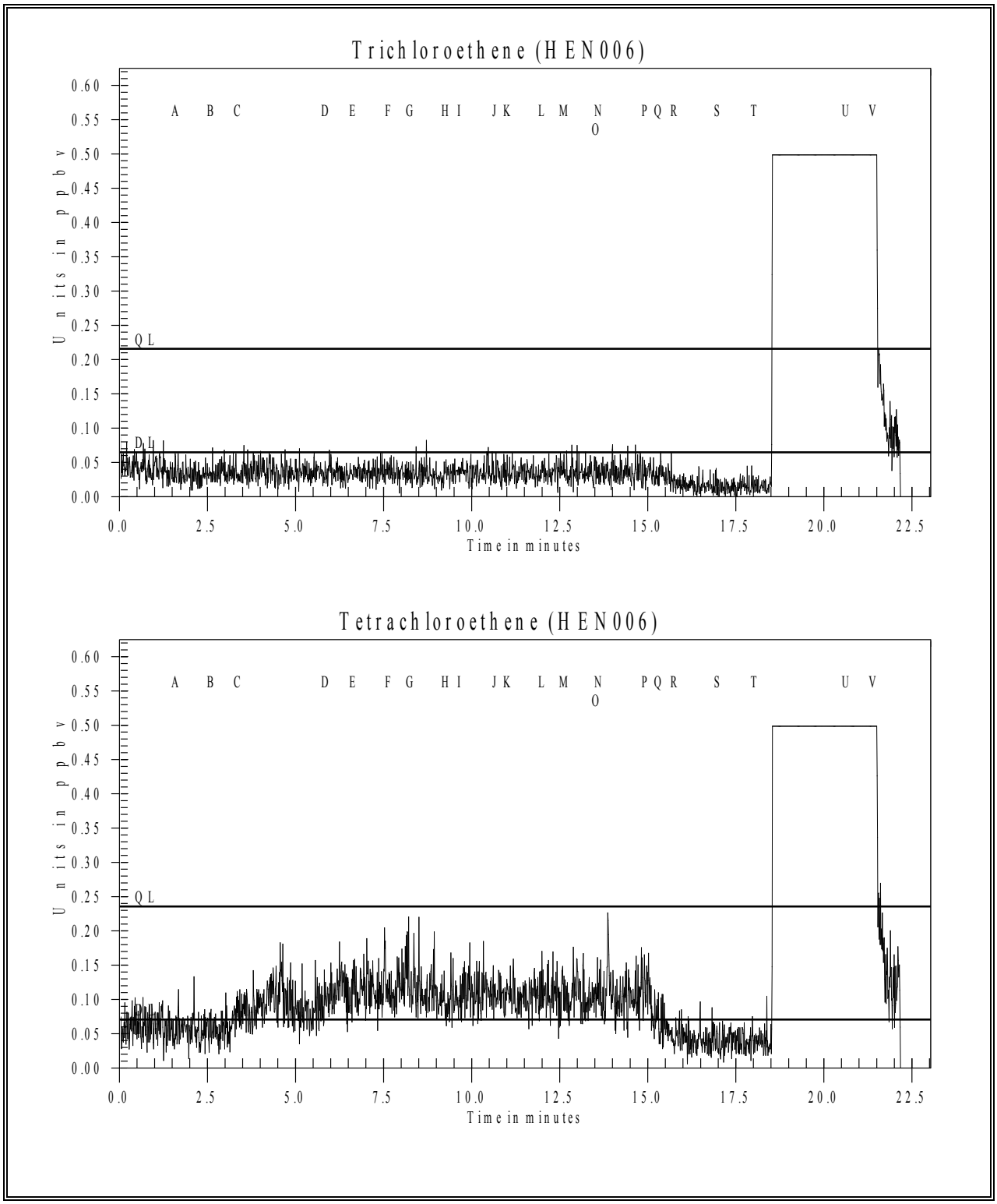


Figure 3c Unit 3 Survey for Trichloroethene and Tetrachloroethene

Figure 3d

TAGA Target Compound Summary for Unit 3 File: HEN006 Acquired on 21 March 2012 at 09:34:20			
		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.065	0.071
	Quantitation Limits - QL:	0.22	0.24
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.065	DL=0.071
E - F	Living room	DL=0.065	0.12J
G - H	Bedroom one	DL=0.065	0.12J
I - J	Bedroom two	DL=0.065	0.11J
K - L	Bathroom	DL=0.065	0.11J
M - N	Utility/furnace room	DL=0.065	0.11J
O - P	Bathroom two	DL=0.065	0.11J
S - T	Post-exit ambient	DL=0.065	DL=0.071
U - V	30 mL/min spike	6.7	6.4

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

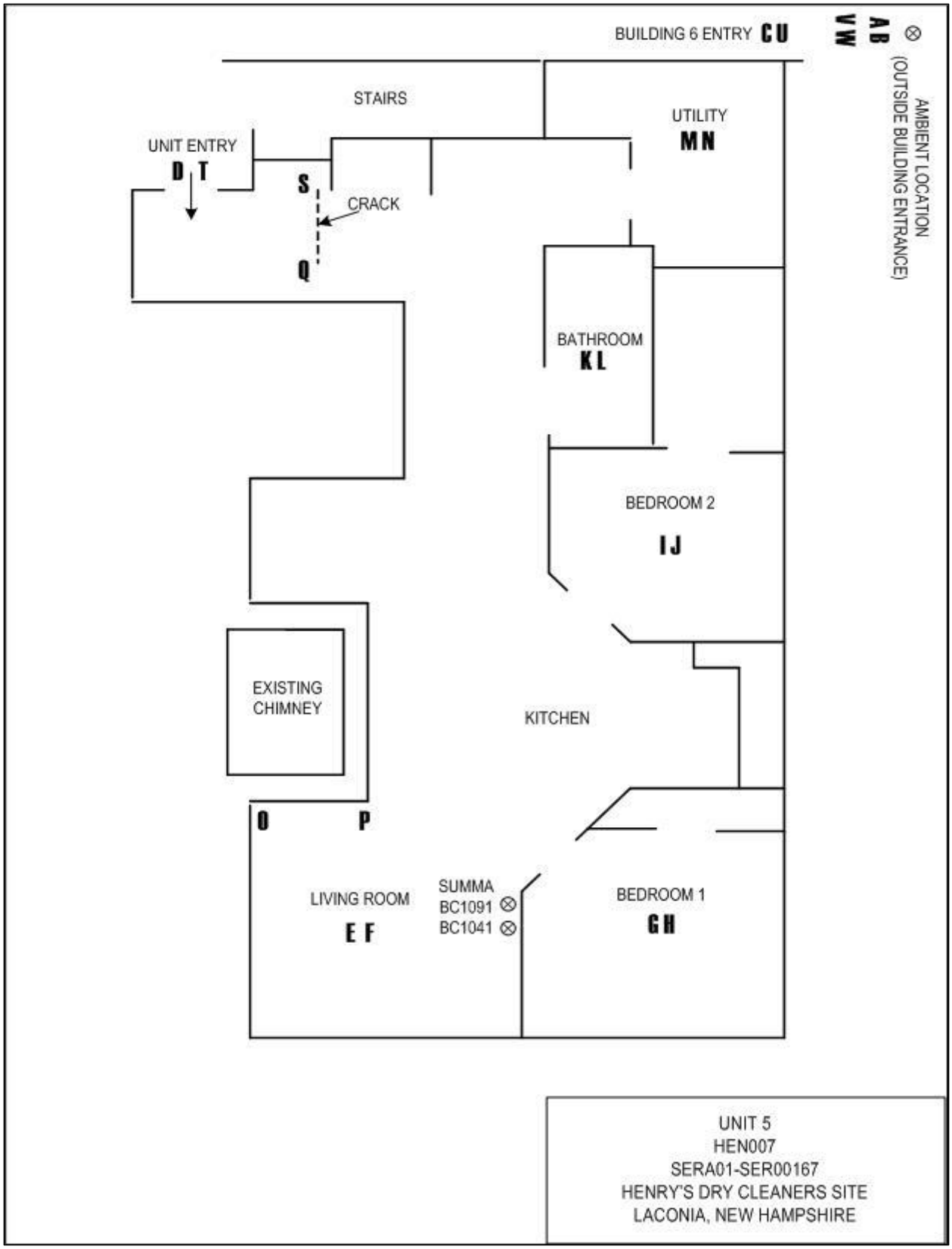


Figure 4a Unit 5 Floor Plan, HEN007

Figure 4b

TAGA File Event Summary
File: HEN007 Acquired on 21 March 2012 at 10:14:00
Title: Unit 5 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.9	184	Start of the pre-entry ambient
B	2.9	280	End of the pre-entry ambient
C	3.8	367	Entering Building 6
D	4.4	421	Entering Unit 5
E	6.4	611	Start of the living room
F	7.4	706	End of the living room
G	7.9	754	Start of bedroom one
H	9.0	859	End of bedroom one
I	9.5	902	Start of bedroom two
J	10.5	997	End of bedroom two
K	10.8	1029	Start of the bathroom
L	11.8	1122	End of the bathroom
M	12.2	1163	Start of the utility room
N	13.2	1257	End of the utility room
O	14.8	1412	Start of the chimney
P	15.8	1508	End of the chimney
Q	17.5	1666	Start of the crack in the floor at the entry way
S	19.8	1882	End of the crack in the floor at the entry way
T	20.1	1914	Exiting the unit
U	20.6	1957	Exiting Building 6
V	21.5	2049	Start of the post-exit ambient
W	22.5	2146	End of the post-exit ambient
X	24.2	2301	Start of the 30 mL/min spike
Y	25.1	2393	End of the 30 mL/min spike

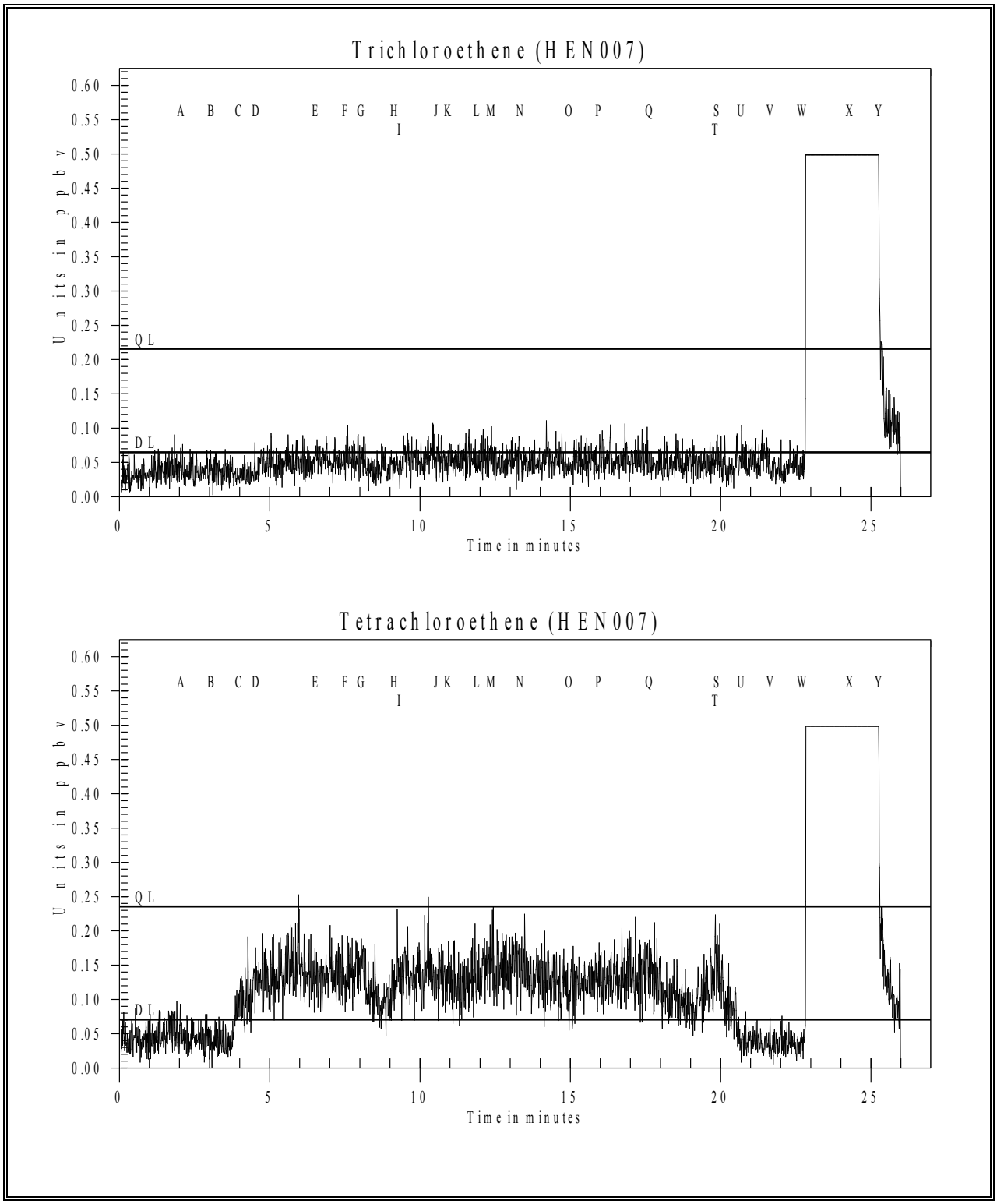


Figure 4c Unit 5 Survey for Trichloroethene and Tetrachloroethene

Figure 4d

TAGA Target Compound Summary for Unit 5
File: HEN007 Acquired on 21 March 2012 at 10:14:00

		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.065	0.071
	Quantitation Limits - QL:	0.22	0.24
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.065	DL=0.071
E - F	Living room	DL=0.065	0.14J
G - H	Bedroom one	DL=0.065	0.11J
I - J	Bedroom two	DL=0.065	0.14J
K - L	Bathroom	DL=0.065	0.13J
M - N	Utility room	DL=0.065	0.15J
O - P	Chimney	DL=0.065	0.12J
Q - S	Crack in the floor at the entry way	DL=0.065	0.11J
V - W	Post-exit ambient	DL=0.065	DL=0.071
X - Y	30 mL/min spike	6.7	6.3

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

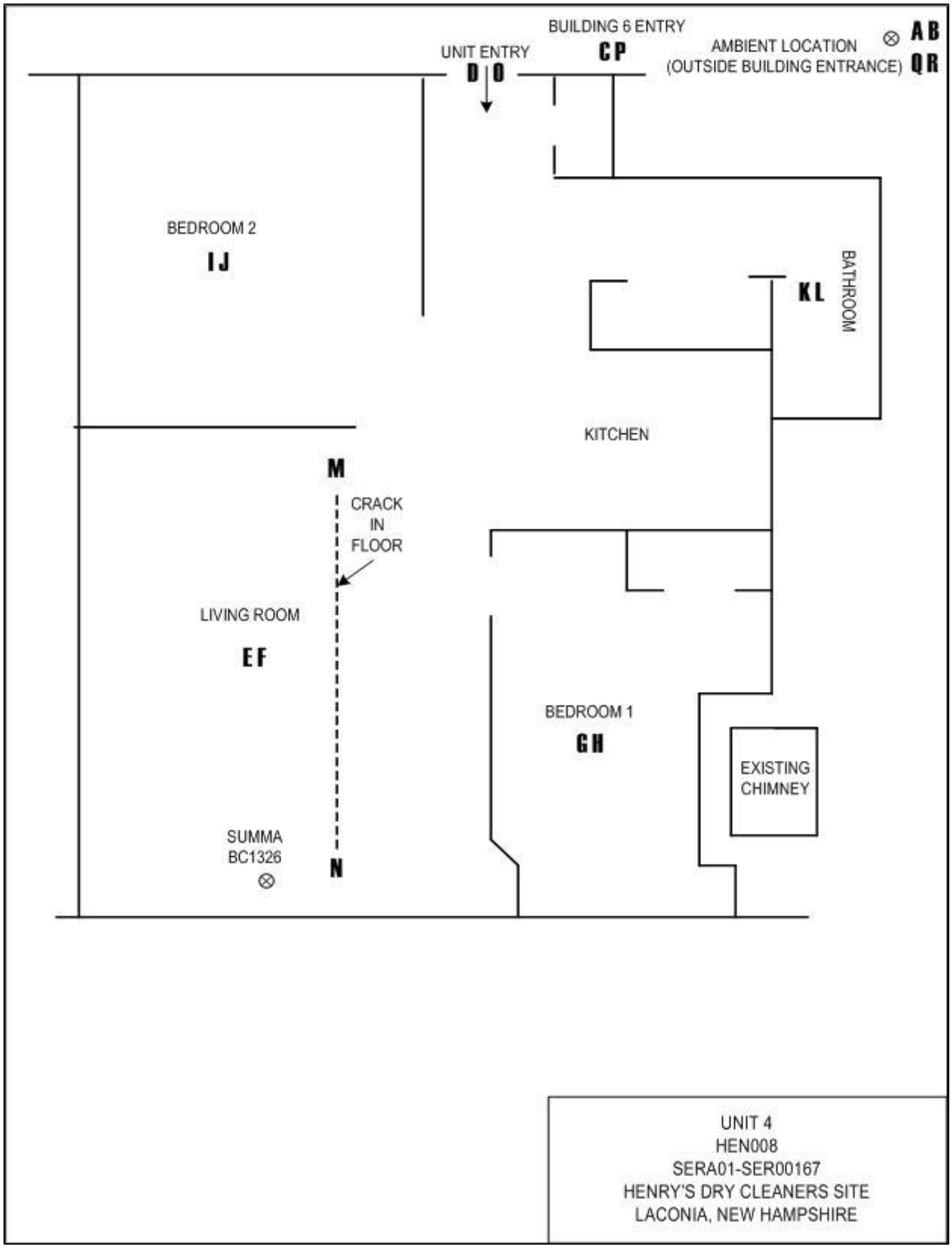
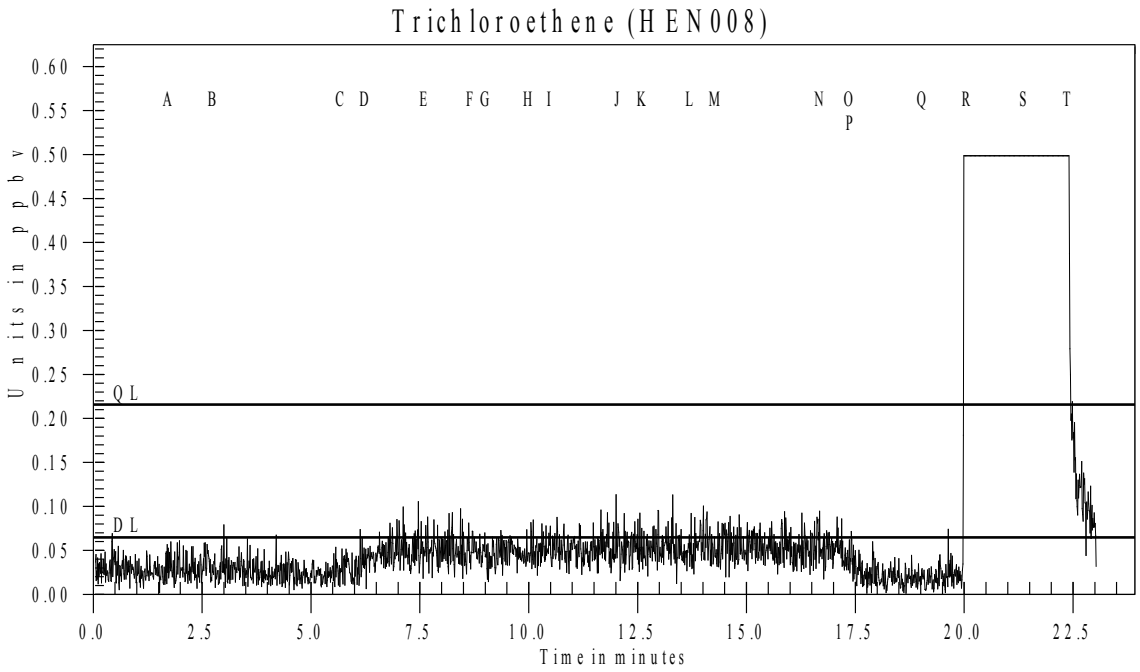


Figure 5a Unit 4 Floor Plan, HEN008

Figure 5b

TAGA File Event Summary
File: HEN008 Acquired on 21 March 2012 at 10:42:30
Title: Unit 4 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.6	153	Start of the pre-entry ambient
B	2.6	251	End of the pre-entry ambient
C	5.6	530	Entering Building 6
D	6.1	583	Entering Unit 4
E	7.5	714	Start of the living room
F	8.6	816	End of the living room
G	8.9	846	Start of bedroom one
H	9.9	940	End of bedroom one
I	10.4	992	Start of bedroom two
J	12.0	1140	End of bedroom two
K	12.5	1189	Start of the bathroom
L	13.6	1295	End of the bathroom
M	14.1	1346	Start of the crack in the floor of the living room
N	16.6	1577	End of the crack in the floor of the living room
O	17.2	1641	Exiting the unit
P	17.6	1676	Exiting Building 6
Q	18.9	1801	Start of the post-exit ambient
R	19.9	1899	End of the post-exit ambient
S	21.3	2025	Start of the 30 mL/min spike
T	22.3	2120	End of the 30 mL/min spike



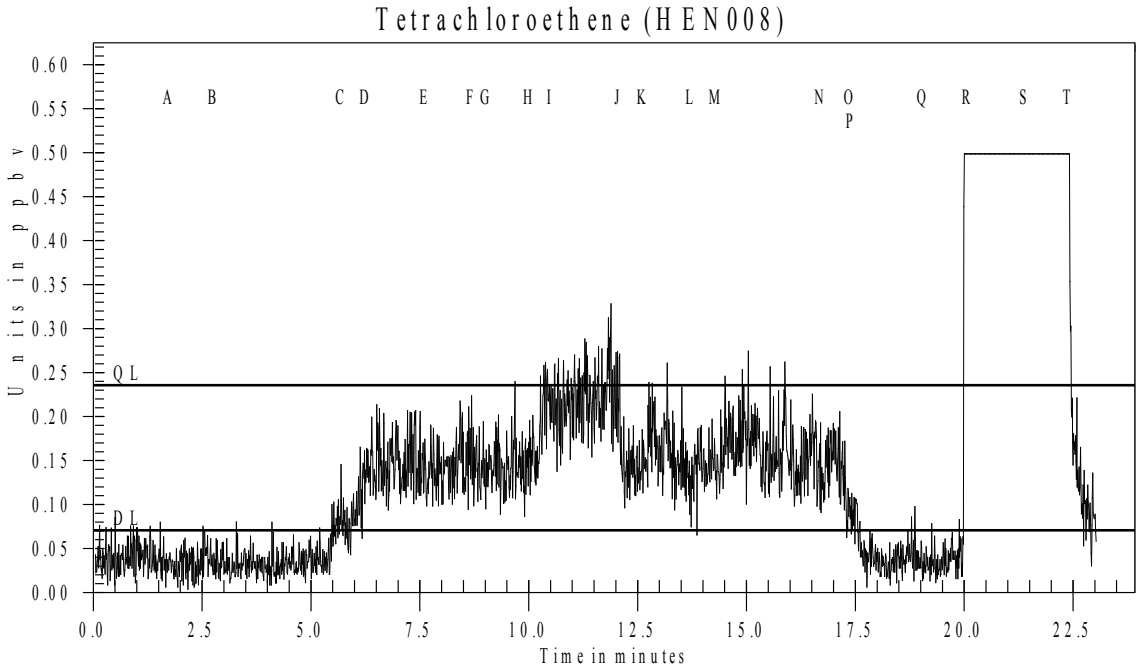


Figure 5c Unit 4 Survey for Trichloroethene and Tetrachloroethene

Figure 5d

TAGA Target Compound Summary for Unit 4
File: HEN008 Acquired on 21 March 2012 at 10:42:30

		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.065	0.071
	Quantitation Limits - QL:	0.22	0.24
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.065	DL=0.071
E - F	Living room	DL=0.065	0.14J
G - H	Bedroom one	DL=0.065	0.14J
I - J	Bedroom two	DL=0.065	0.22J
K - L	Bathroom	DL=0.065	0.16J
M - N	Crack in the floor of the living room	DL=0.065	0.16J
Q - R	Post-exit ambient	DL=0.065	DL=0.071
S - T	30 mL/min spike	6.7	6.4

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

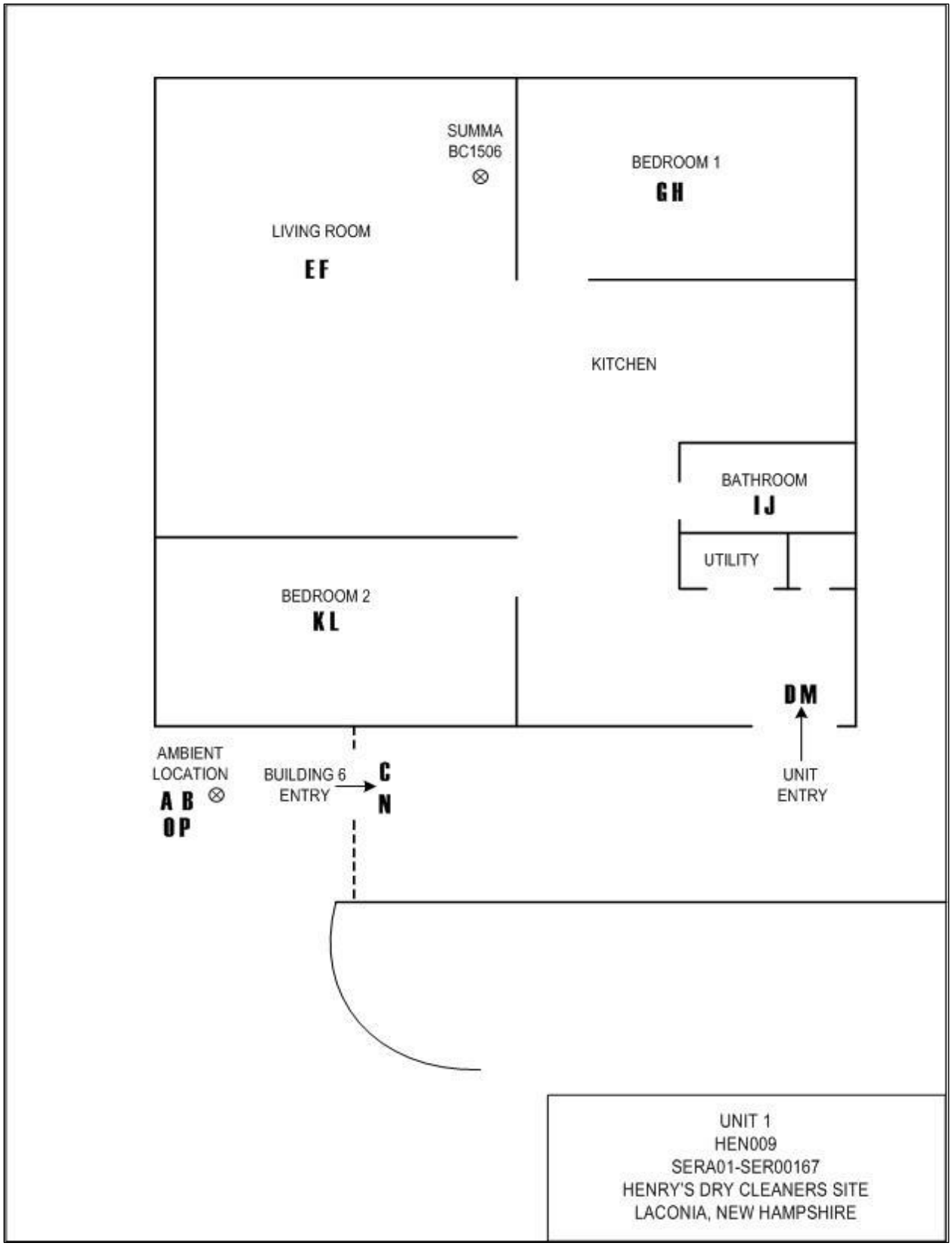


Figure 6a Unit 1 Floor Plan, HEN009

Figure 6b

TAGA File Event Summary
File: HEN009 Acquired on 21 March 2012 at 11:22:20
Title: Unit 1 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.3	121	Start of the pre-entry ambient
B	2.3	221	End of the pre-entry ambient
C	3.8	361	Entering Building 6
D	4.4	416	Entering Unit 1
E	5.3	508	Start of the living room
F	6.4	608	End of the living room
G	6.8	645	Start of bedroom one
H	7.8	743	End of bedroom one
I	8.1	772	Start of the bathroom
J	9.4	900	End of the bathroom
K	9.8	930	Start of bedroom two
L	10.8	1027	End of bedroom two
M	12.5	1195	Exiting the unit
N	13.1	1243	Exiting Building 6
O	14.4	1370	Start of the post-exit ambient
P	15.4	1465	End of the post-exit ambient
Q	16.6	1585	Start of the 30 mL/min spike
R	17.7	1681	End of the 30 mL/min spike

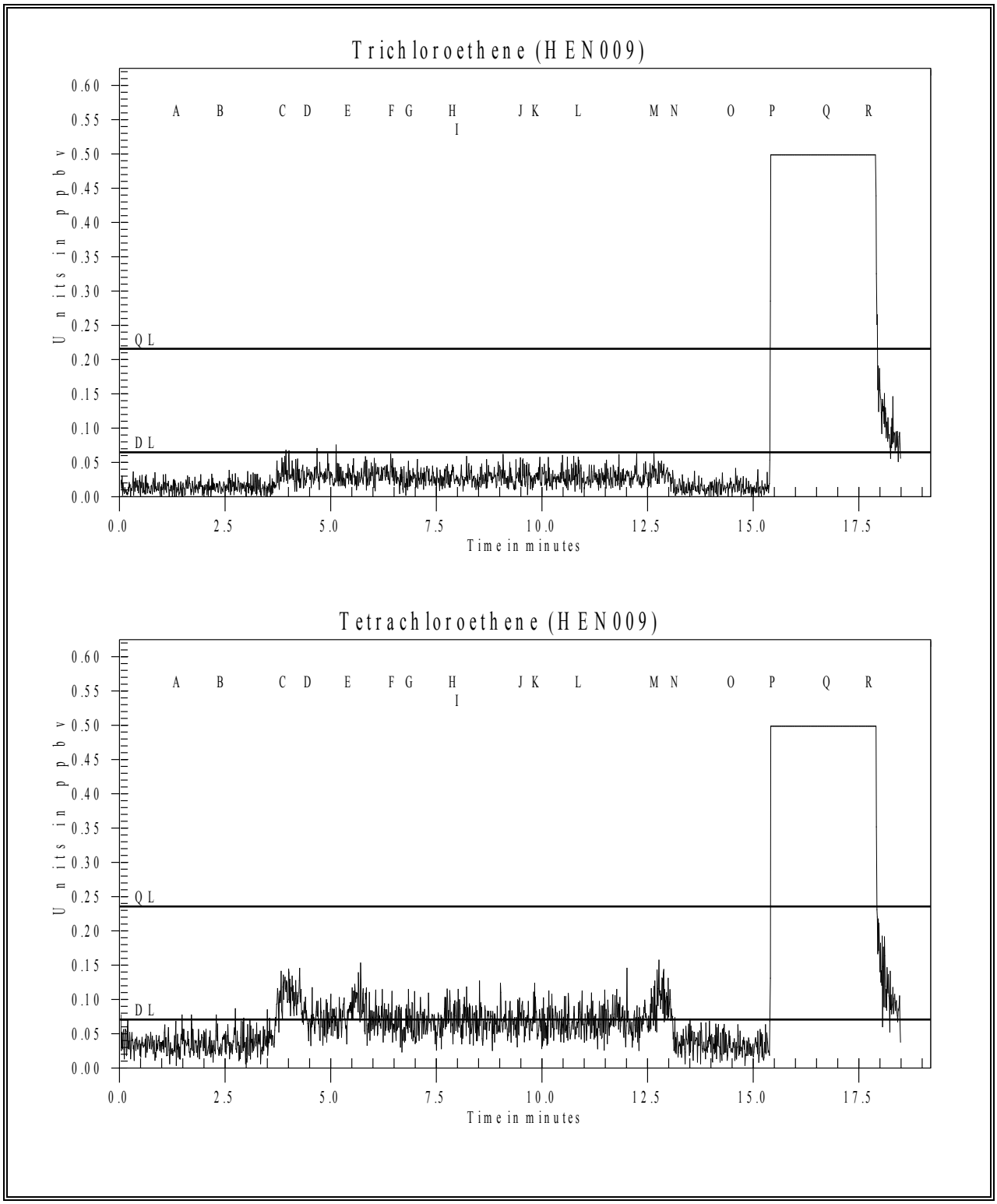


Figure 6c Unit 1 Survey for Trichloroethene and Tetrachloroethene

Figure 6d

TAGA Target Compound Summary for Unit 1
File: HEN009 Acquired on 21 March 2012 at 11:22:20

		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.065	0.071
	Quantitation Limits - QL:	0.22	0.24
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.065	DL=0.071
E - F	Living room	DL=0.065	0.081J
G - H	Bedroom one	DL=0.065	DL=0.071
I - J	Bathroom	DL=0.065	DL=0.071
K - L	Bedroom two	DL=0.065	DL=0.071
O - P	Post-exit ambient	DL=0.065	DL=0.071
Q - R	30 mL/min spike	6.5	6.2

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

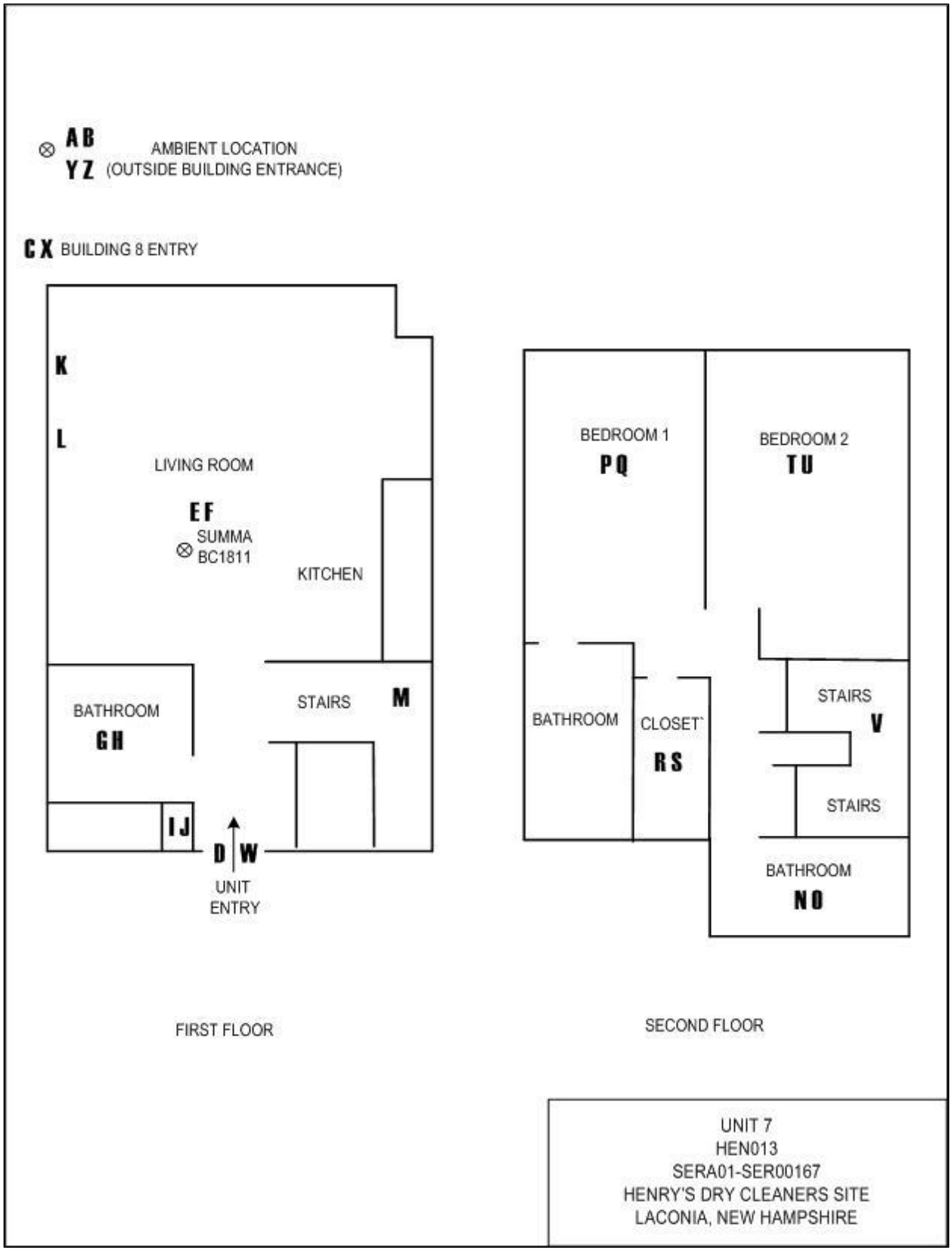


Figure 7a Unit 7 Floor Plan, HEN013

Figure 7b

TAGA File Event Summary
File: HEN013 Acquired on 21 March 2012 at 13:31:30
Title: Unit 7 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.4	132	Start of the pre-entry ambient
B	2.4	229	End of the pre-entry ambient
C	2.8	272	Entering Building 8
D	3.2	307	Entering Unit 7
E	3.9	375	Start of the living room/kitchen
F	4.9	467	End of the living room/kitchen
G	6.5	621	Start of the bathroom
H	7.5	718	End of the bathroom
I	10.5	1003	Start of the pipe through the floor next to the furnace
J	11.9	1130	End of the pipe through the floor next to the furnace
K	13.1	1243	Start of the base of the wall at the floor
L	14.2	1357	End of the base of the wall at the floor
M	14.8	1411	Ascending the stairs to the second floor
N	15.8	1501	Start of the second floor bathroom
O	16.8	1604	End of the second floor bathroom
P	17.1	1627	Start of bedroom one
Q	18.3	1746	End of bedroom one
R	18.6	1771	Start of bedroom one closet
S	19.8	1888	End of bedroom one closet
T	20.7	1971	Start of bedroom two
U	21.7	2069	End of bedroom two
V	22.3	2128	Descending the stairs
W	22.7	2163	Exiting the unit
X	23.1	2201	Exiting Building 8
Y	23.6	2246	Start of the post-exit ambient
Z	24.6	2346	End of the post-exit ambient
A1	26.7	2546	Start of the 30 mL/min spike
B1	28.3	2696	End of the 30 mL/min spike

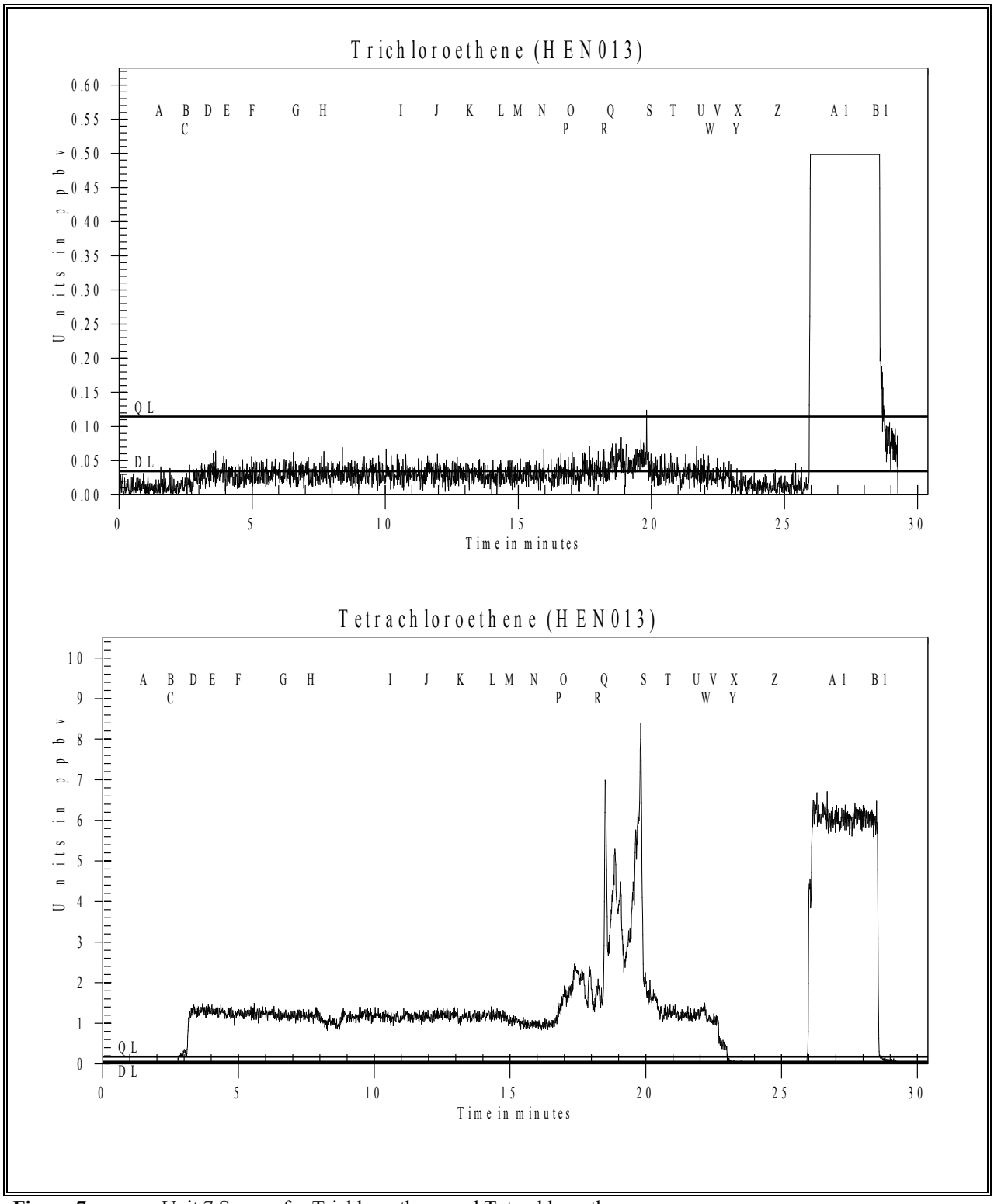


Figure 7c Unit 7 Survey for Trichloroethene and Tetrachloroethene

Figure 7d

TAGA Target Compound Summary for Unit 7
File: HEN013 Acquired on 21 March 2012 at 13:31:30

		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.034	0.053
	Quantitation Limits - QL:	0.11	0.18
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.034	DL=0.053
E - F	Living room/kitchen	DL=0.034	1.3
G - H	Bathroom	DL=0.034	1.2
I - J	Pipe through the floor next to the furnace	DL=0.034	1.2
K - L	Base of the wall at the floor	DL=0.034	1.2
N - O	Second floor bathroom	DL=0.034	1.0
P - Q	Bedroom one	DL=0.034	1.9
R - S	Bedroom one closet	0.051J	4.2
T - U	Bedroom two	DL=0.034	1.2
Y - Z	Post-exit ambient	DL=0.034	DL=0.053
A1 - B1	30 mL/min spike	6.1	6.1

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

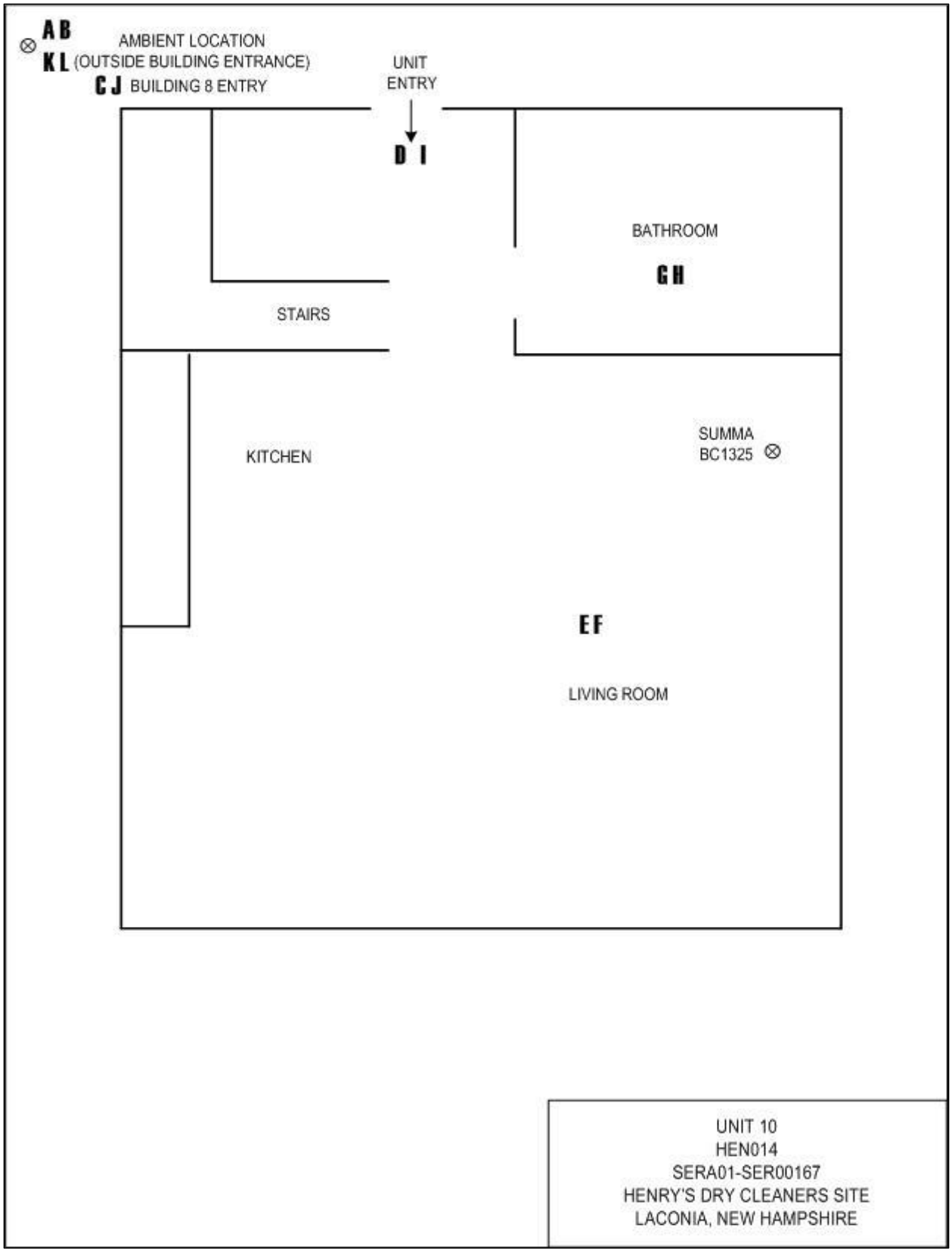


Figure 8a Unit 10 Floor Plan, HEN014

Figure 8b

TAGA File Event Summary
File: HEN014 Acquired on 21 March 2012 at 14:04:44
Title: Unit 10 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.5	143	Start of the pre-entry ambient
B	2.5	238	End of the pre-entry ambient
C	3.6	342	Entering Building 8
D	7.6	722	Entering Unit 10
E	8.0	765	Start of the living room
F	9.5	903	End of the living room
G	9.8	932	Start of the bathroom
H	10.8	1024	End of the bathroom
I	11.3	1079	Exiting the unit
J	12.0	1144	Exiting Building 8
K	13.1	1249	Start of the post-exit ambient
L	14.2	1351	End of the post-exit ambient
M	16.0	1520	Start of the 30 mL/min spike
N	16.8	1596	End of the 30 mL/min spike

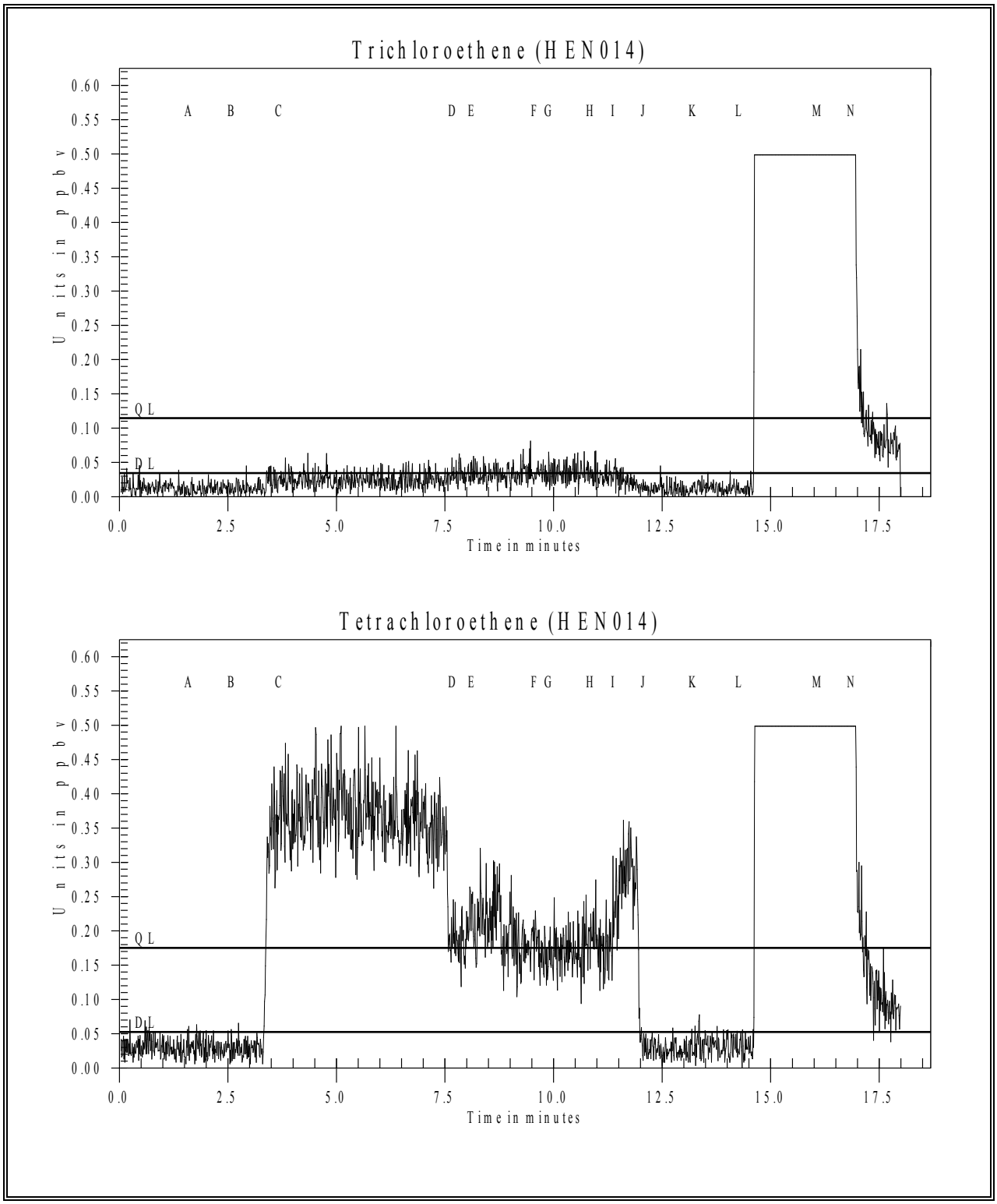


Figure 8c Unit 10 Survey for Trichloroethene and Tetrachloroethene

Figure 8d

TAGA Target Compound Summary for Unit 10 File: HEN014 Acquired on 21 March 2012 at 14:04:44			
		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.034	0.053
	Quantitation Limits - QL:	0.11	0.18
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.034	DL=0.053
E - F	Living room	DL=0.034	0.20
G - H	Bathroom	0.036J	0.17J
K - L	Post-exit ambient	DL=0.034	DL=0.053
M - N	30 mL/min spike	6.3	6.2

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

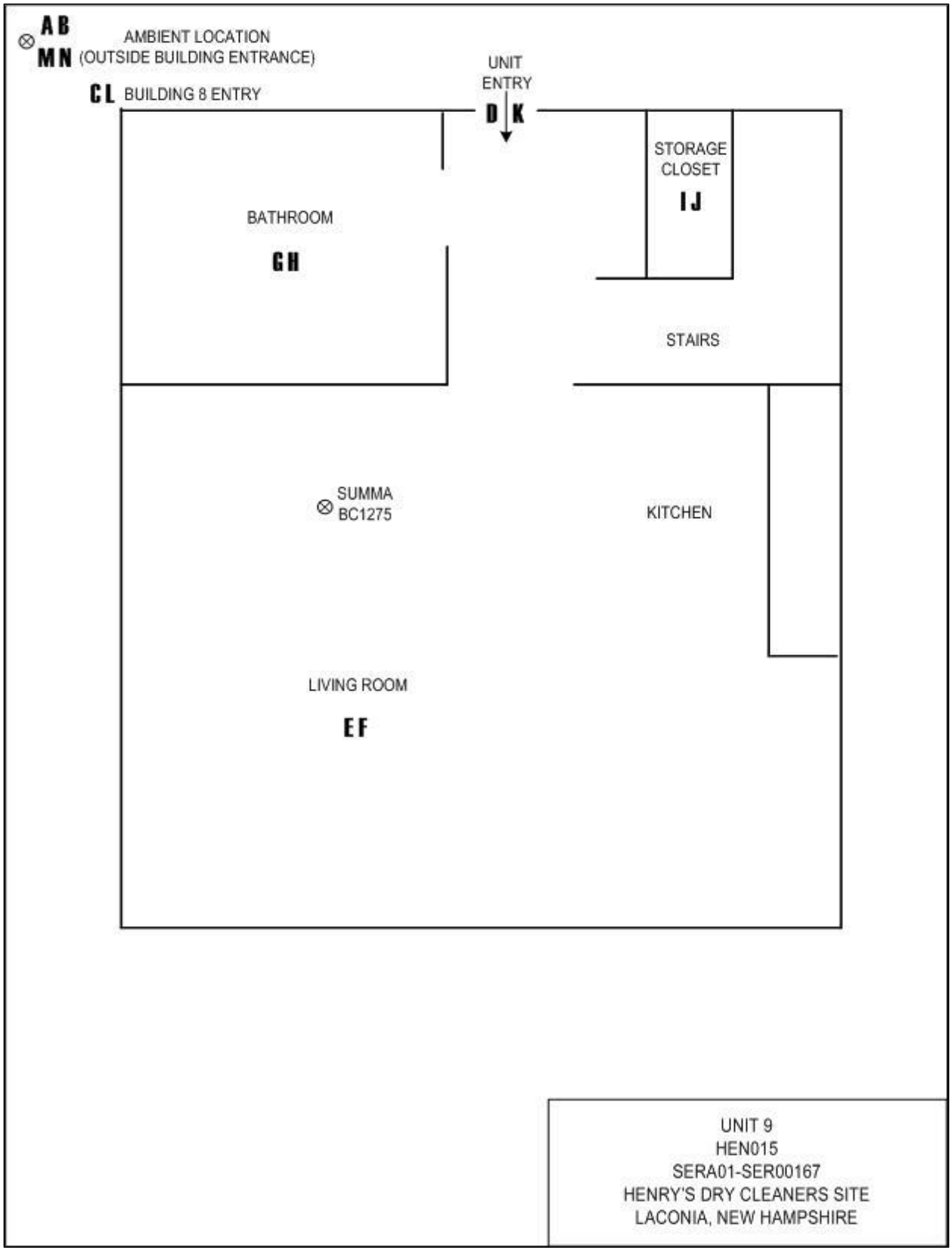
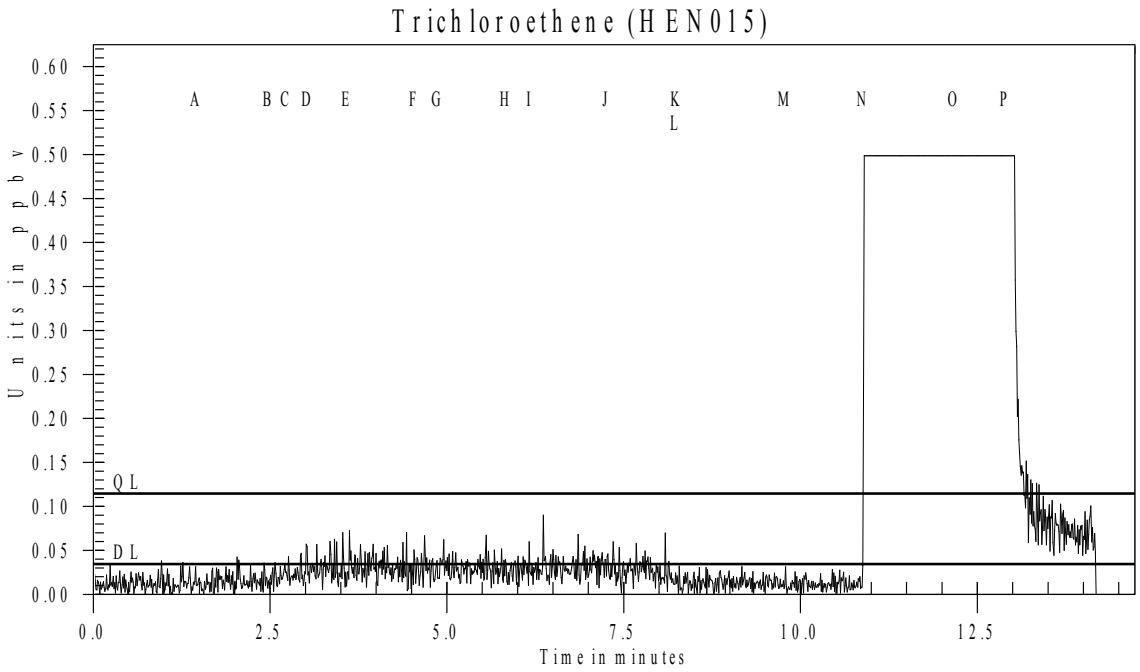


Figure 9a Unit 9 Floor Plan, HEN015

Figure 9b

TAGA File Event Summary
File: HEN015 Acquired on 21 March 2012 at 14:25:52
Title: Unit 9 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.4	131	Start of the pre-entry ambient
B	2.4	229	End of the pre-entry ambient
C	2.7	253	Entering Building 8
D	2.9	281	Entering Unit 9
E	3.5	335	Start of the living room/kitchen area
F	4.5	426	End of the living room/kitchen area
G	4.8	456	Start of the bathroom
H	5.7	548	End of the bathroom
I	6.1	584	Start of the storage closet
J	7.2	686	End of the storage closet
K	8.2	778	Exiting the unit
L	8.4	798	Exiting Building 8
M	9.7	922	Start of the post-exit ambient
N	10.8	1028	End of the post-exit ambient
O	12.1	1151	Start of the 30 mL/min spike
P	12.8	1221	End of the 30 mL/min spike



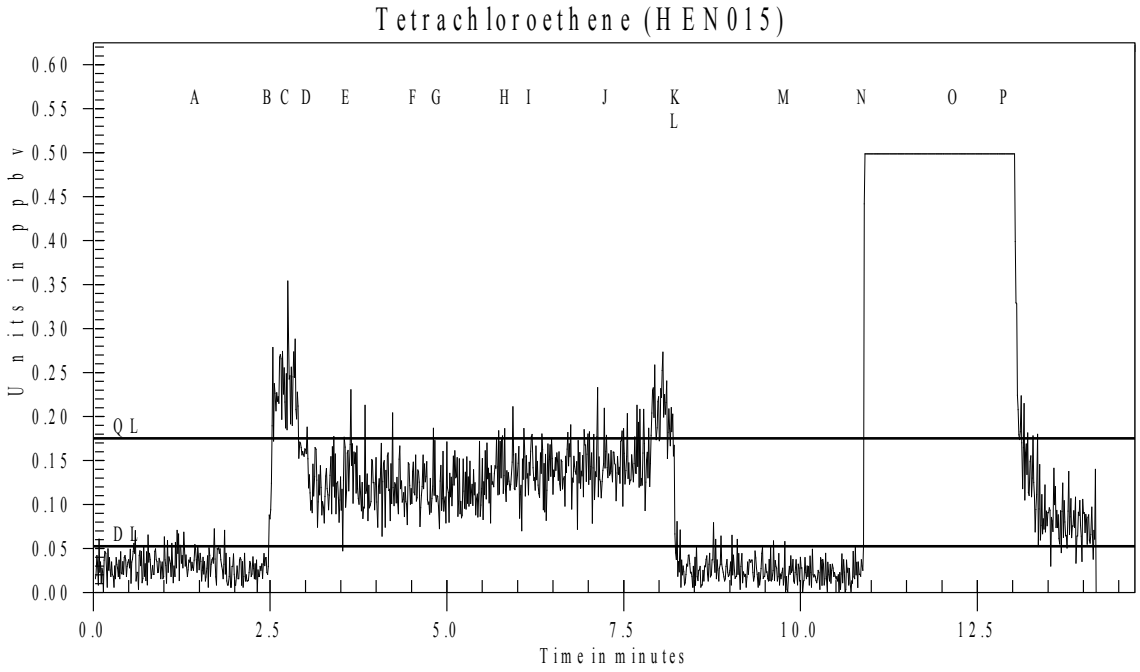


Figure 9c Unit 9 Survey for Trichloroethene and Tetrachloroethene

Figure 9d

TAGA Target Compound Summary for Unit 9 File: HEN015 Acquired on 21 March 2012 at 14:25:52			
		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.034	0.053
	Quantitation Limits - QL:	0.11	0.18
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.034	DL=0.053
E - F	Living room/kitchen area	DL=0.034	0.13J
G - H	Bathroom	DL=0.034	0.12J
I - J	Storage closet	DL=0.034	0.14J
M - N	Post-exit ambient	DL=0.034	DL=0.053
O - P	30 mL/spike	6.4	6.2

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

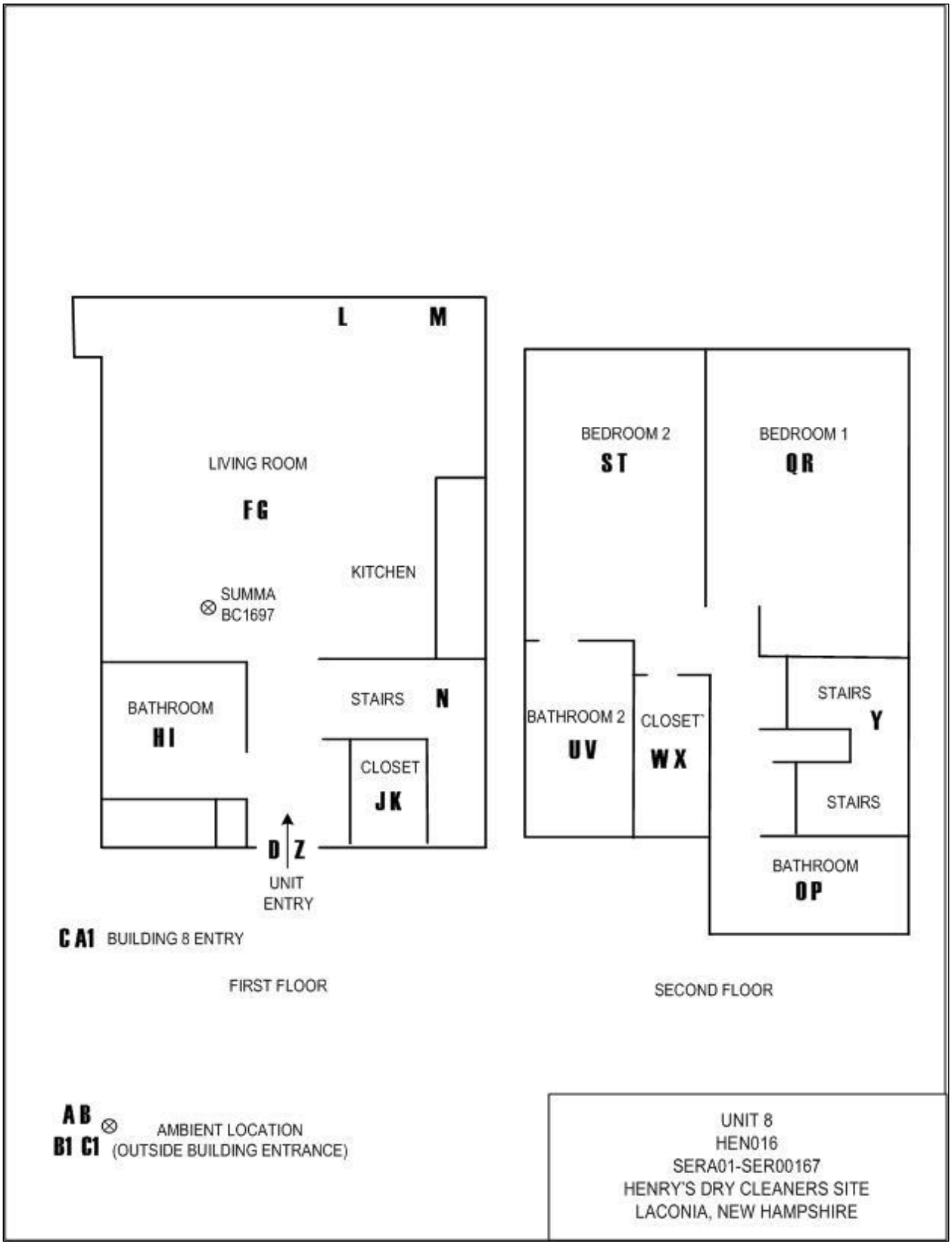


Figure 10a Unit 8 Floor Plan, HEN016

Figure 10b

TAGA File Event Summary
File: HEN016 Acquired on 21 March 2012 at 14:42:22
Title: Unit 8 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.4	135	Start of the pre-entry ambient
B	2.7	256	End of the pre-entry ambient
C	3.3	311	Entering Building 8
D	4.0	380	Entering Unit 8
F	4.9	464	Start of the living room
G	5.9	564	End of the living room
H	6.9	653	Start of the bathroom
I	8.0	760	End of the bathroom
J	8.4	797	Start of the closet
K	9.5	908	End of the closet
L	10.9	1036	Start of the base of the wall at the floor of the living room
M	11.9	1138	End of the base of the wall at the floor of the living room
N	12.7	1213	Ascending the stairs to the second floor
O	13.3	1271	Start of the second floor bathroom
P	14.4	1376	End of the second floor bathroom
Q	15.2	1446	Start of bedroom one
R	16.4	1563	End of bedroom one
S	17.1	1631	Start of bedroom two
T	18.2	1731	End of bedroom two
U	18.6	1768	Start of the second floor bathroom two
V	19.6	1865	End of the second floor bathroom two
W	19.9	1893	Start of bedroom two closet
X	20.9	1988	End of bedroom two closet
Y	21.5	2047	Descending the stairs
Z	22.0	2099	Exiting the unit
A1	22.1	2106	Exiting Building 8
B1	22.4	2137	Start of the post-exit ambient
C1	24.3	2310	End of the post-exit ambient
D1	26.0	2475	Start of the 30 mL/min spike
E1	27.1	2576	End of the 30 mL/min spike

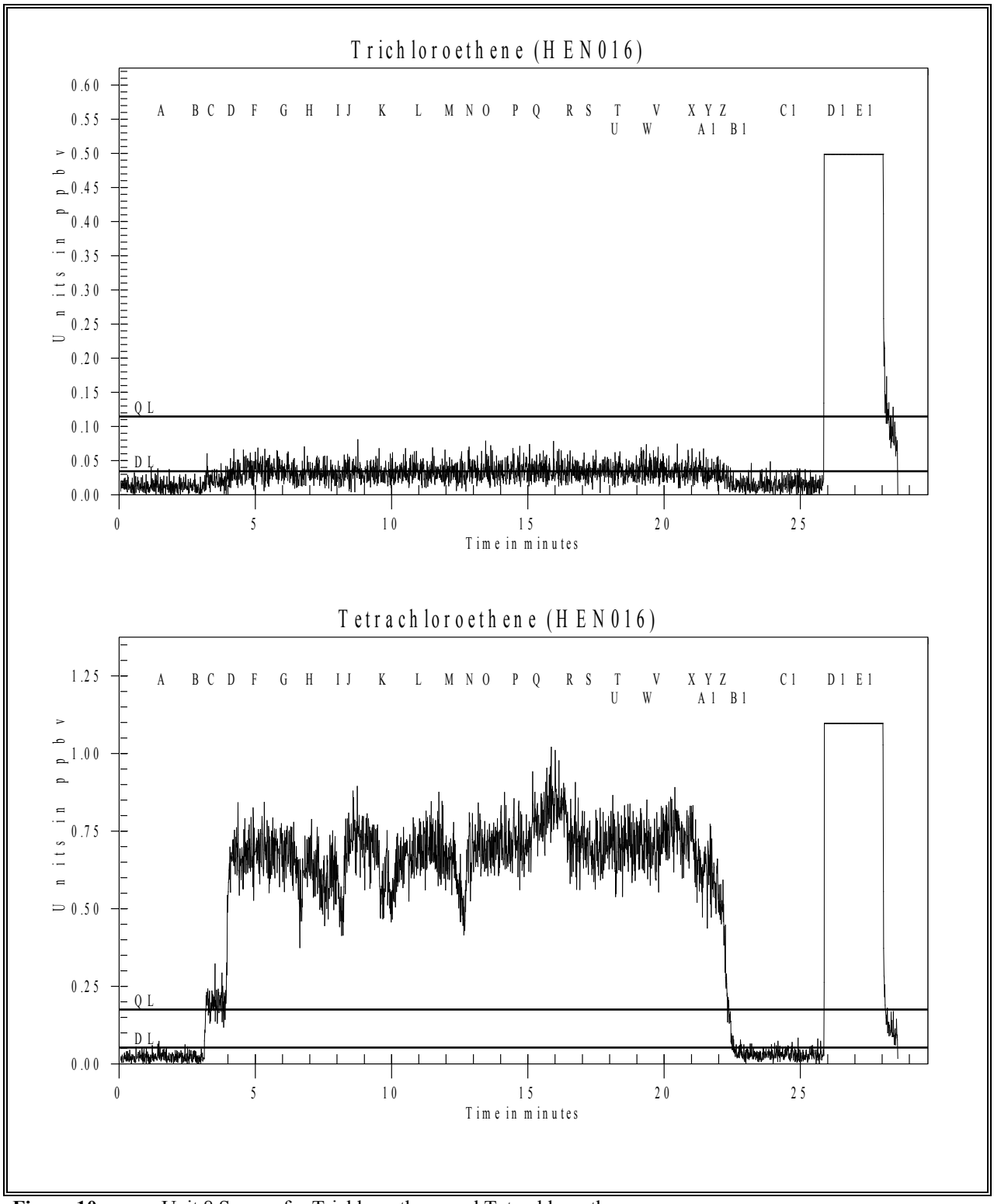


Figure 10c Unit 8 Survey for Trichloroethene and Tetrachloroethene

Figure 10d

TAGA Target Compound Summary for Unit 8
File: HEN016 Acquired on 21 March 2012 at 14:42:22

		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.034	0.053
	Quantitation Limits - QL:	0.11	0.18
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.034	DL=0.053
F - G	Living room	0.038J	0.69
H - I	Bathroom	DL=0.034	0.62
J - K	Closet	DL=0.034	0.72
L - M	Base of the wall at the floor of the living room	DL=0.034	0.70
O - P	Second floor bathroom	0.036J	0.71
Q - R	Bedroom one	0.036J	0.82
S - T	Bedroom two	0.035J	0.70
U - V	Second floor bathroom two	0.038J	0.71
W - X	Bedroom two closet	0.035J	0.75
B1 - C1	Post-exit ambient	DL=0.034	DL=0.053
D1 - E1	30 mL/min spike	6.6	6.4

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

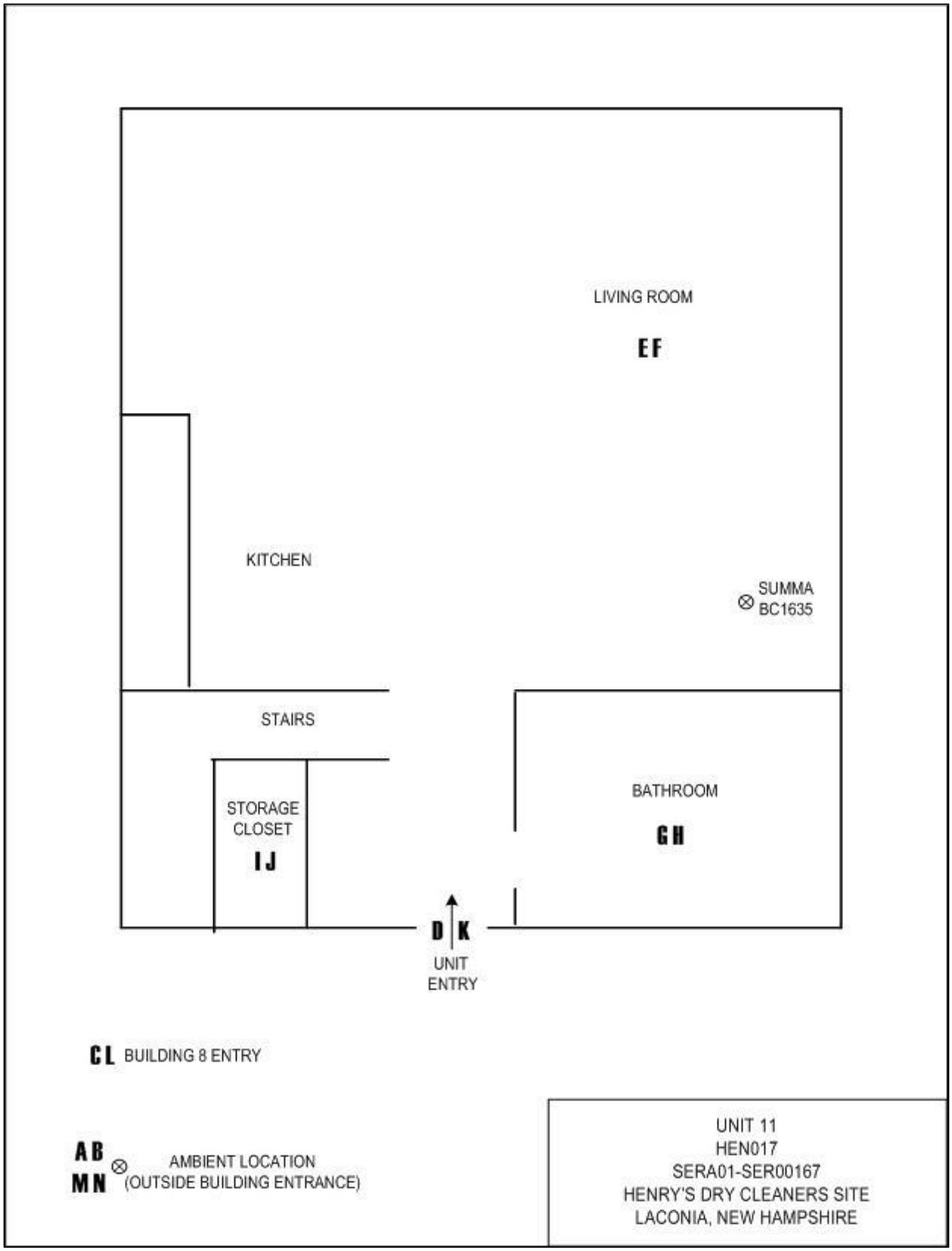


Figure 11a Unit 11 Floor Plan, HEN017

Figure 11b

TAGA File Event Summary
File: HEN017 Acquired on 21 March 2012 at 15:26:38
Title: Unit 11 Survey

Flag	Offset Time	Offset Sequence	Description
A	2.2	210	Start of the pre-entry ambient
B	3.4	321	End of the pre-entry ambient
C	4.1	389	Entering Building 8
D	4.6	440	Entering Unit 11
E	5.3	502	Start of the living room/kitchen area
F	6.3	597	End of the living room/kitchen area
G	6.7	637	Start of the bathroom
H	7.7	733	End of the bathroom
I	8.0	760	Start of the storage closet
J	9.0	856	End of the storage closet
K	9.3	883	Exiting the unit
L	9.6	910	Exiting Building 8
M	11.0	1051	Start of the post-exit ambient
N	12.1	1148	End of the post-exit ambient
O	13.6	1293	Start of the 30 mL/min spike
P	14.7	1402	End of the 30 mL/min spike

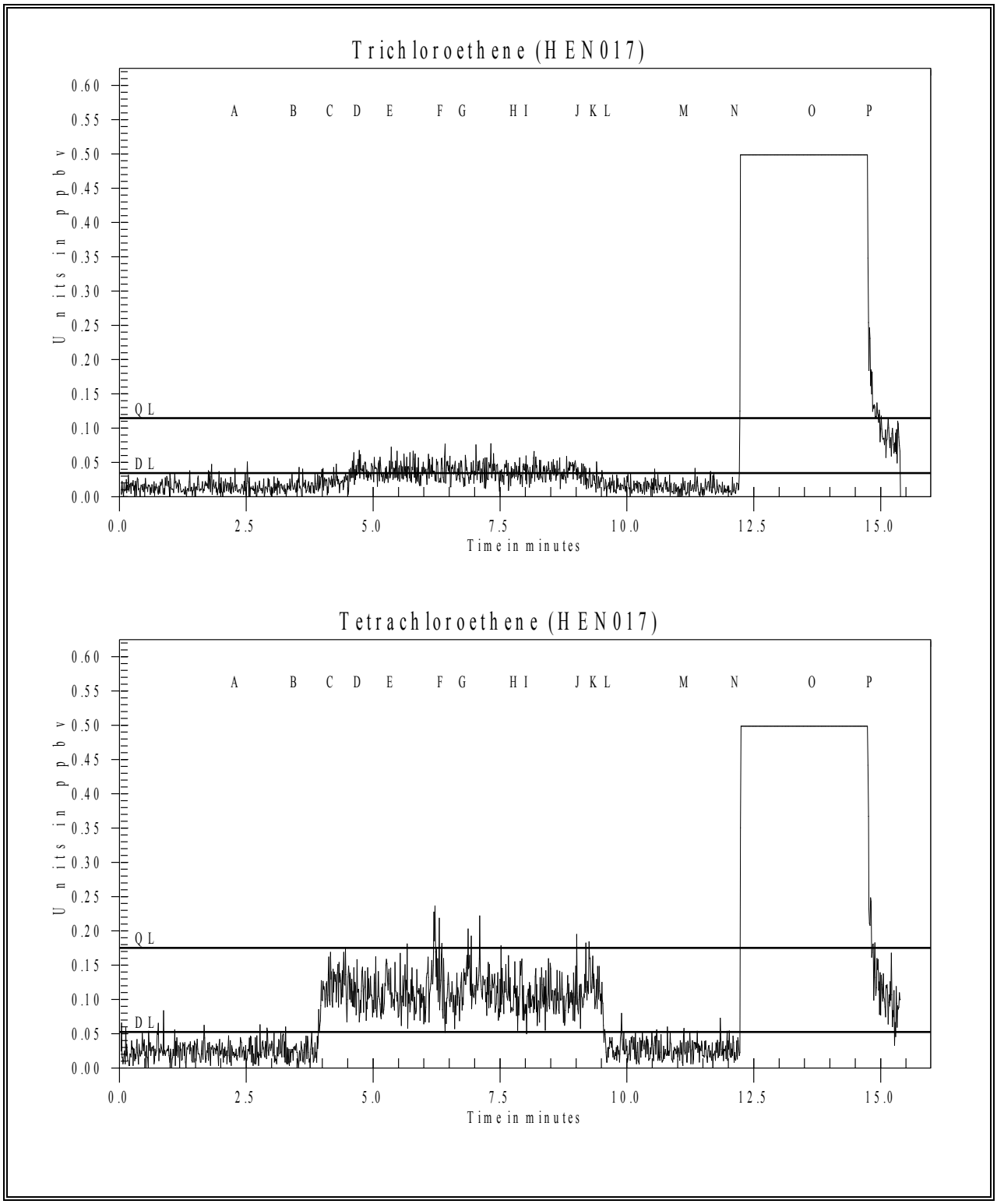


Figure 11c Unit 11 Survey for Trichloroethene and Tetrachloroethene

Figure 11d

TAGA Target Compound Summary for Unit 11
File: HEN017 Acquired on 21 March 2012 at 15:26:38

		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.034	0.053
	Quantitation Limits - QL:	0.11	0.18
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.034	DL=0.053
E - F	Living room/kitchen area	0.039J	0.12J
G - H	Bathroom	0.037J	0.12J
I - J	Storage closet	0.039J	0.10J
M - N	Post-exit ambient	DL=0.034	DL=0.053
O - P	30 mL/min spike	6.4	6.2

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

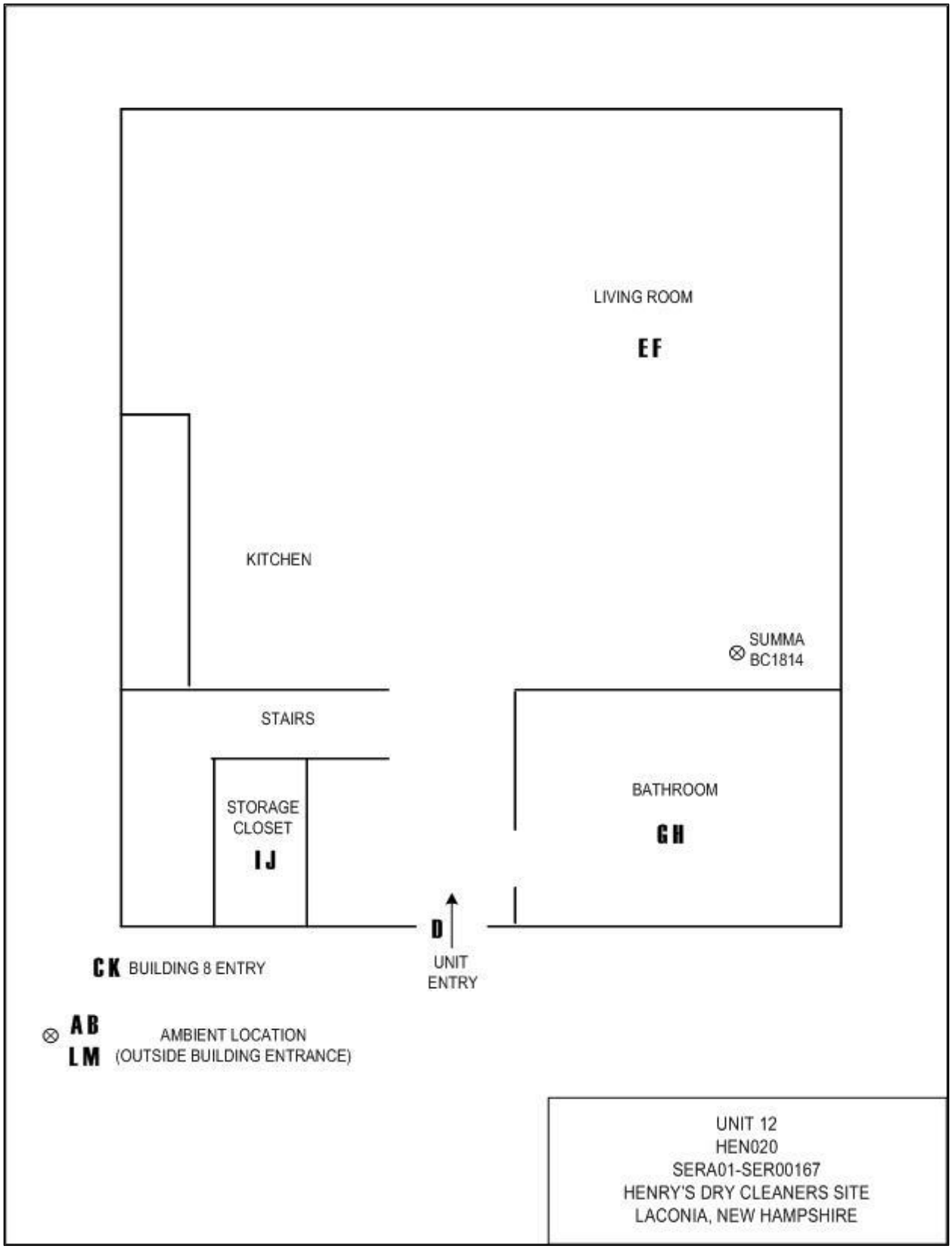


Figure 12a Unit 12 Floor Plan, HEN020

Figure 12b

TAGA File Event Summary
File: HEN020 Acquired on 21 March 2012 at 15:48:29
Title: Unit 12 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.7	162	Start of the pre-entry ambient
B	2.7	256	End of the pre-entry ambient
C	4.1	394	Entering Building 8
D	4.6	440	Entering Unit 12
E	5.1	490	Start of the living room/kitchen area
F	6.1	584	End of the living room/kitchen area
G	7.1	674	Start of the bathroom
H	8.1	768	End of the bathroom
I	8.4	803	Start of the storage closet
J	9.4	900	End of the storage closet
K	10.6	1012	Exiting Building 8
L	12.1	1157	Start of the post-exit ambient
M	12.8	1217	End of the post-exit ambient
N	14.3	1361	Start of the 30 mL/min spike
O	14.9	1421	End of the 30 mL/min spike

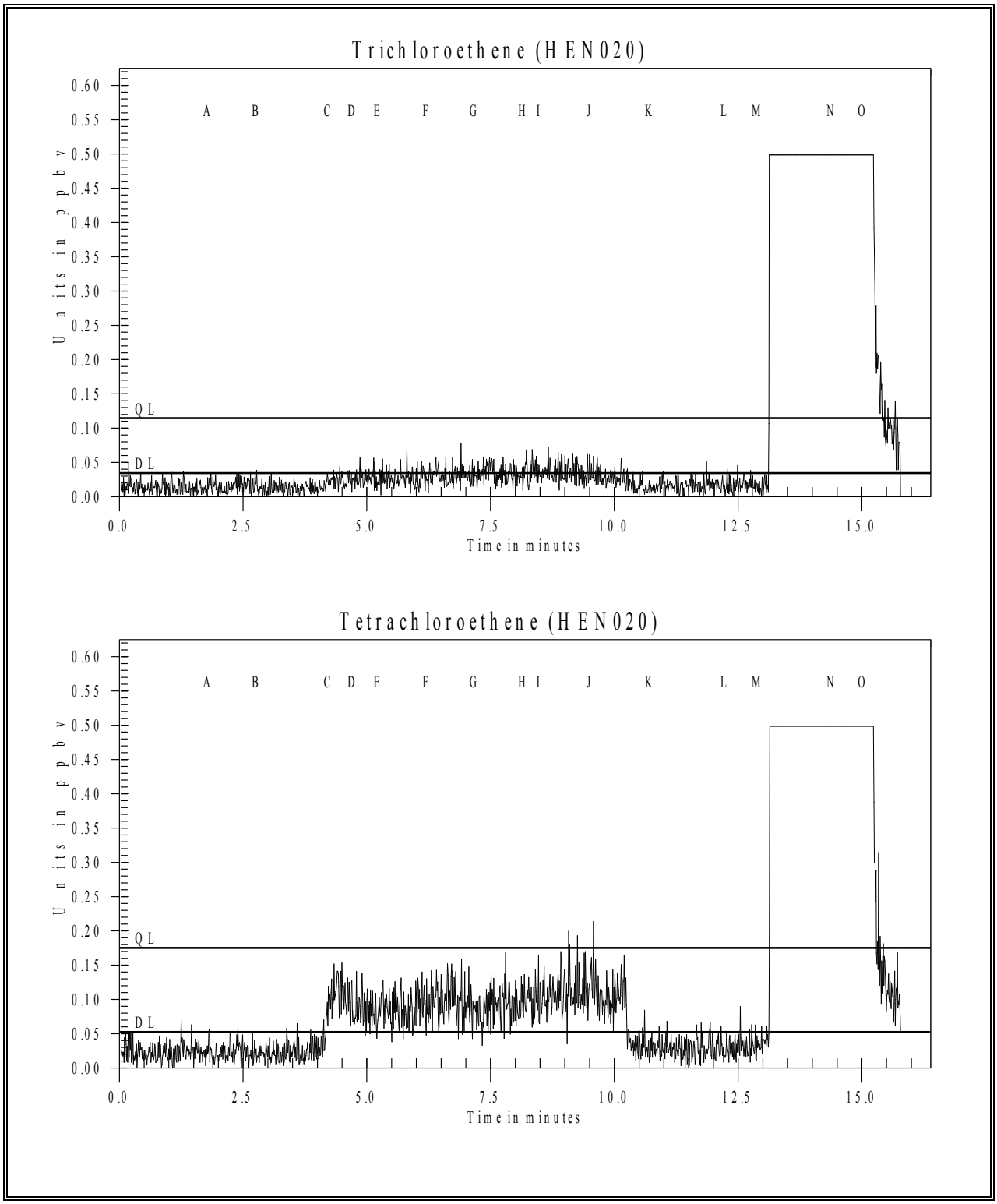


Figure 12c Unit 12 Survey for Trichloroethene and Tetrachloroethene

Figure 12d

TAGA Target Compound Summary for Unit 12 File: HEN020 Acquired on 21 March 2012 at 15:48:29			
		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.034	0.053
	Quantitation Limits - QL:	0.11	0.18
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.034	DL=0.053
E - F	Living room/kitchen area	DL=0.034	0.088J
G - H	Bathroom	0.035J	0.091J
I - J	Storage closet	0.037J	0.11J
L - M	Post-exit ambient	DL=0.034	DL=0.053
N - O	30 mL/min spike	7.5	6.8

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

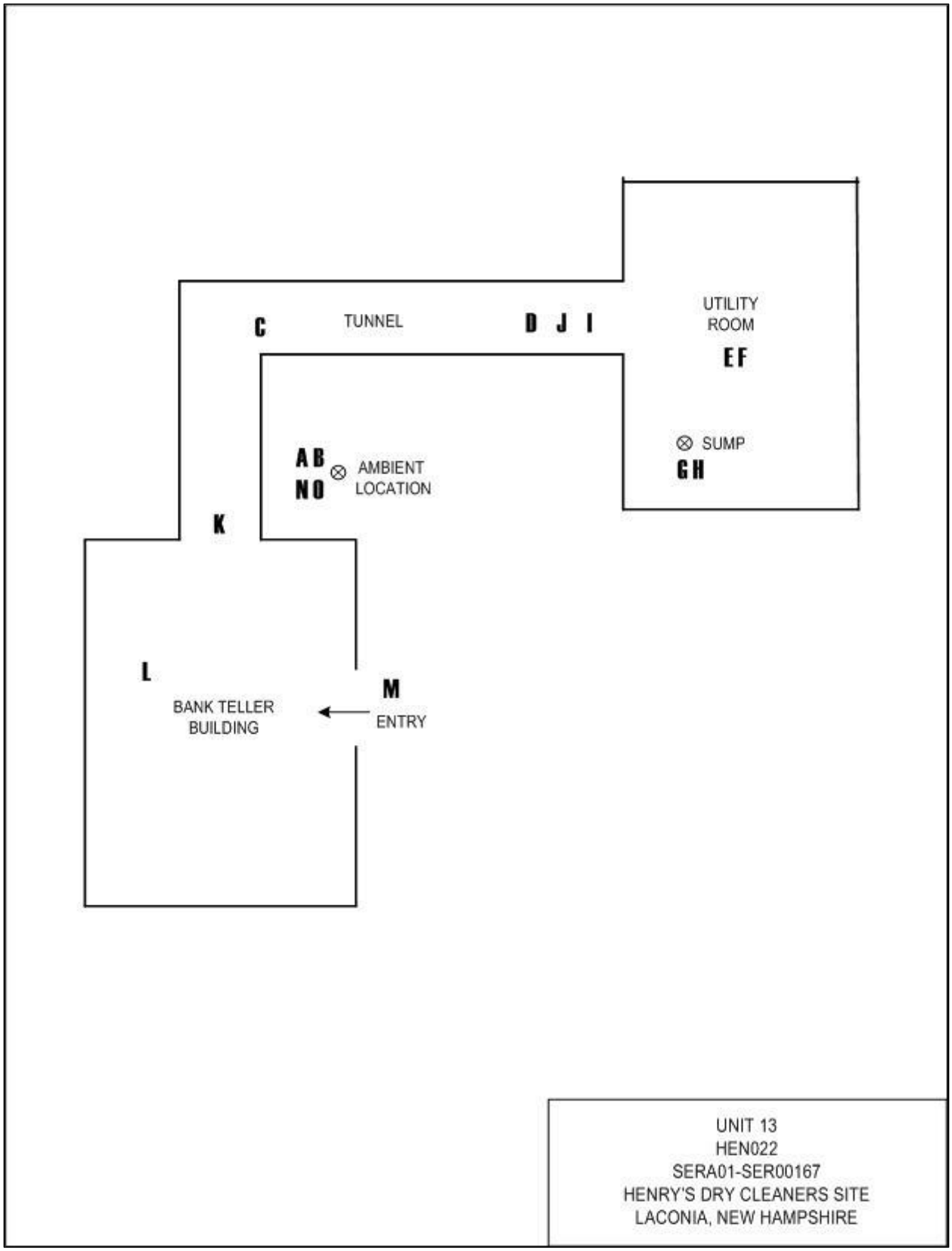


Figure 13a Unit 13 Floor Plan, HEN022

Figure 13b

TAGA File Event Summary
File: HEN022 Acquired on 21 March 2012 at 17:00:59
Title: Unit 13 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.4	130	Start of the pre-entry ambient
B	2.4	226	End of the pre-entry ambient
C	15.9	1514	Start of the cracks in the wall of the tunnel
D	24.7	2355	End of the cracks in the wall of the tunnel
E	26.6	2535	Start of the utility room
F	28.7	2732	End of the utility room
G	31.8	3030	Start of the sump
H	32.8	3126	End of the sump
I	33.8	3214	Exiting the utility room
J	34.4	3275	Entering the tunnel
K	35.3	3359	Exiting the tunnel
L	35.7	3402	Start of the teller area
M	36.3	3460	Exiting the building
N	37.5	3567	Start of the post-exit ambient
O	38.5	3662	End of the post-exit ambient
P	40.5	3858	Start of the 30 mL/min spike
Q	41.2	3918	End of the 30 mL/min spike

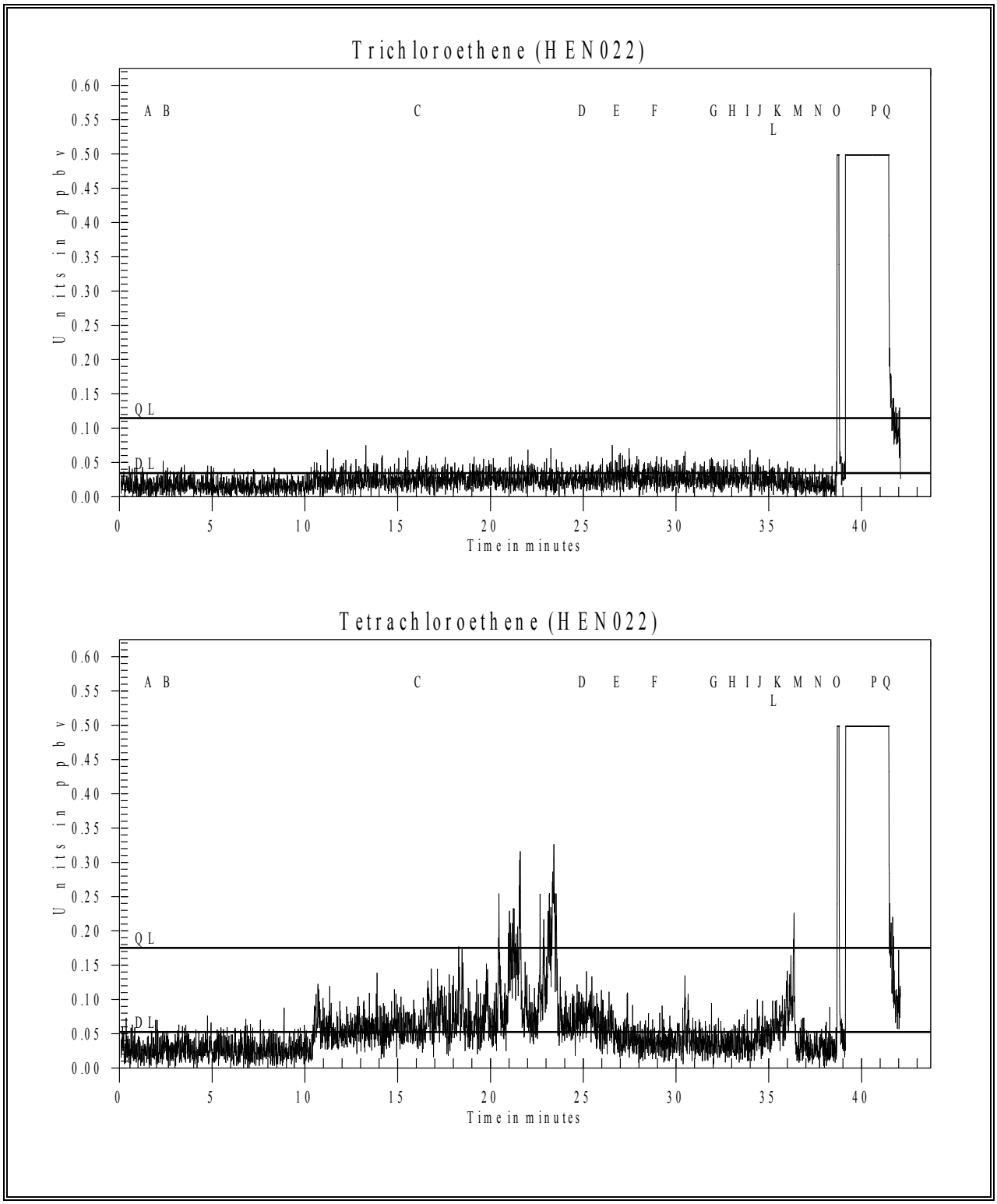


Figure 13c Unit 13 Survey for Trichloroethene and Tetrachloroethene

Figure 13d

TAGA Target Compound Summary for Unit 13 File: HEN022 Acquired on 21 March 2012 at 17:00:59			
		Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.034	0.053
	Quantitation Limits - QL:	0.11	0.18
Flags	Description	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.034	DL=0.053
C - D	Cracks in the wall of the tunnel	DL=0.034	0.093J
E - F	Utility room	DL=0.034	DL=0.053
G - H	Sump	DL=0.034	DL=0.053
J - K	Tunnel	DL=0.034	DL=0.053
L - M	Teller area	DL=0.034	0.10J
N - O	Post-exit ambient	DL=0.034	DL=0.053
P - Q	30 mL/min spike	6.9	6.5

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

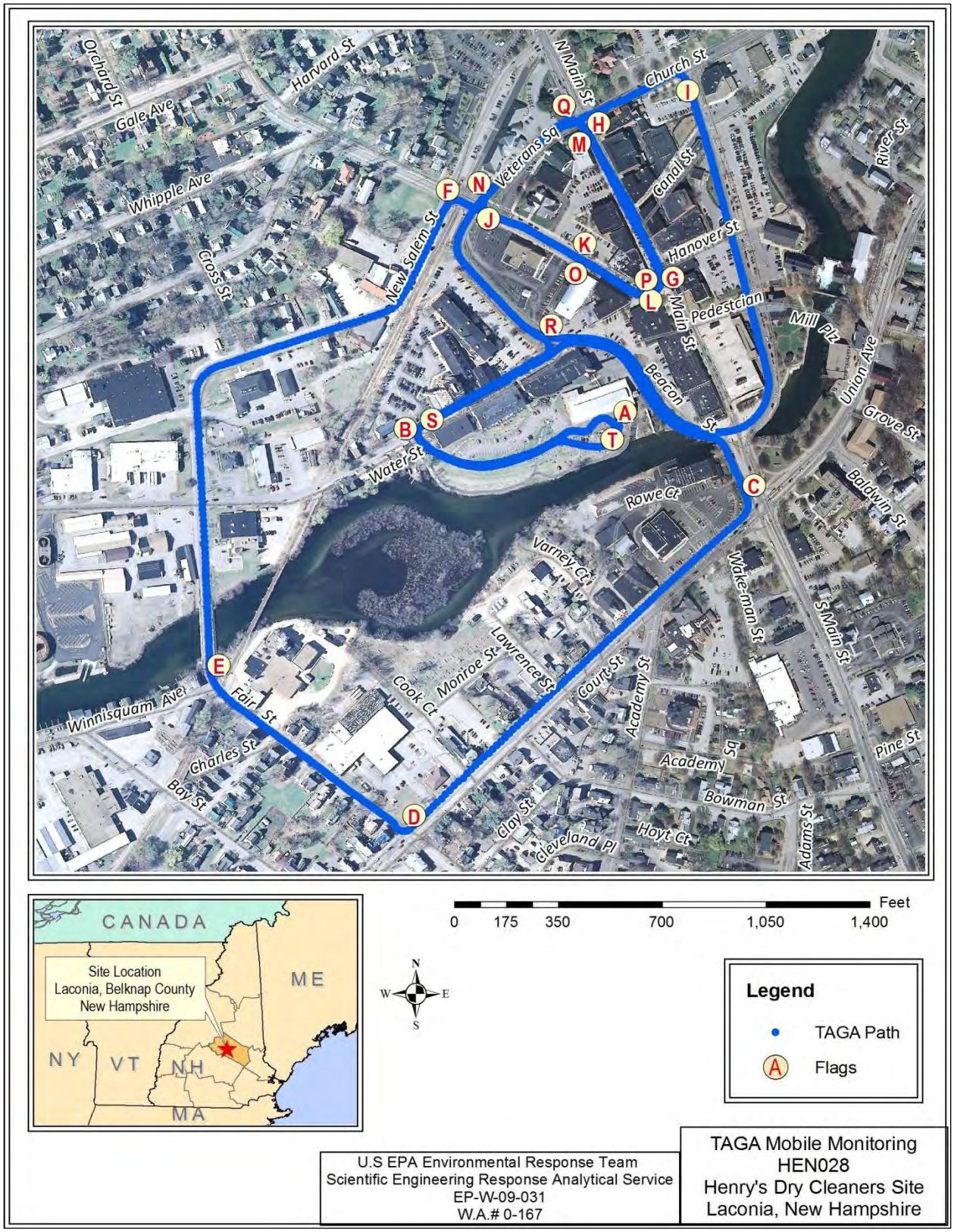


Figure 14a Mobile Monitoring Path at Henry's Dry Cleaners Site, HEN028

Figure 14b

TAGA File Event Summary
File: HEN028 Acquired on 22 March 2012 at 13:10:10 UTC
Title: Mobile Monitoring at Henry's Dry Cleaners Site

Flag	Time	Sequence	Description
A	0.9	85	Start of mobile monitoring at the command post
B	3.2	302	Turning right onto Water Street
C	5.6	530	Turning right onto Court Street
D	7.2	686	Turning right onto Fair Street
E	8.4	802	Crossing a bridge onto New Salem Street
F	10.8	1029	Turning right onto Pleasant Street
G	12.5	1190	Turning left onto Main Street
H	13.6	1294	Turning left onto Veteran's Square
I	18.6	1771	Turning left onto Church Street
J	20.1	1911	Turning left onto Pleasant Street
K	20.8	1979	Passing Henry's Dry Cleaners on the right
L	21.4	2037	Turning left onto Main Street
M	22.6	2150	Turning left onto Veteran's Square
N	23.2	2207	Turning left onto Pleasant Street
O	24.0	2287	Passing Henry's Dry Cleaners on the right
P	24.6	2344	Turning left onto Main Street
Q	26.2	2498	Turning left onto Veteran's Square
R	27.4	2610	Turning right onto Water Street
S	28.4	2707	Turning left onto Landing Lane
T	30.4	2893	End of mobile monitoring at the command post

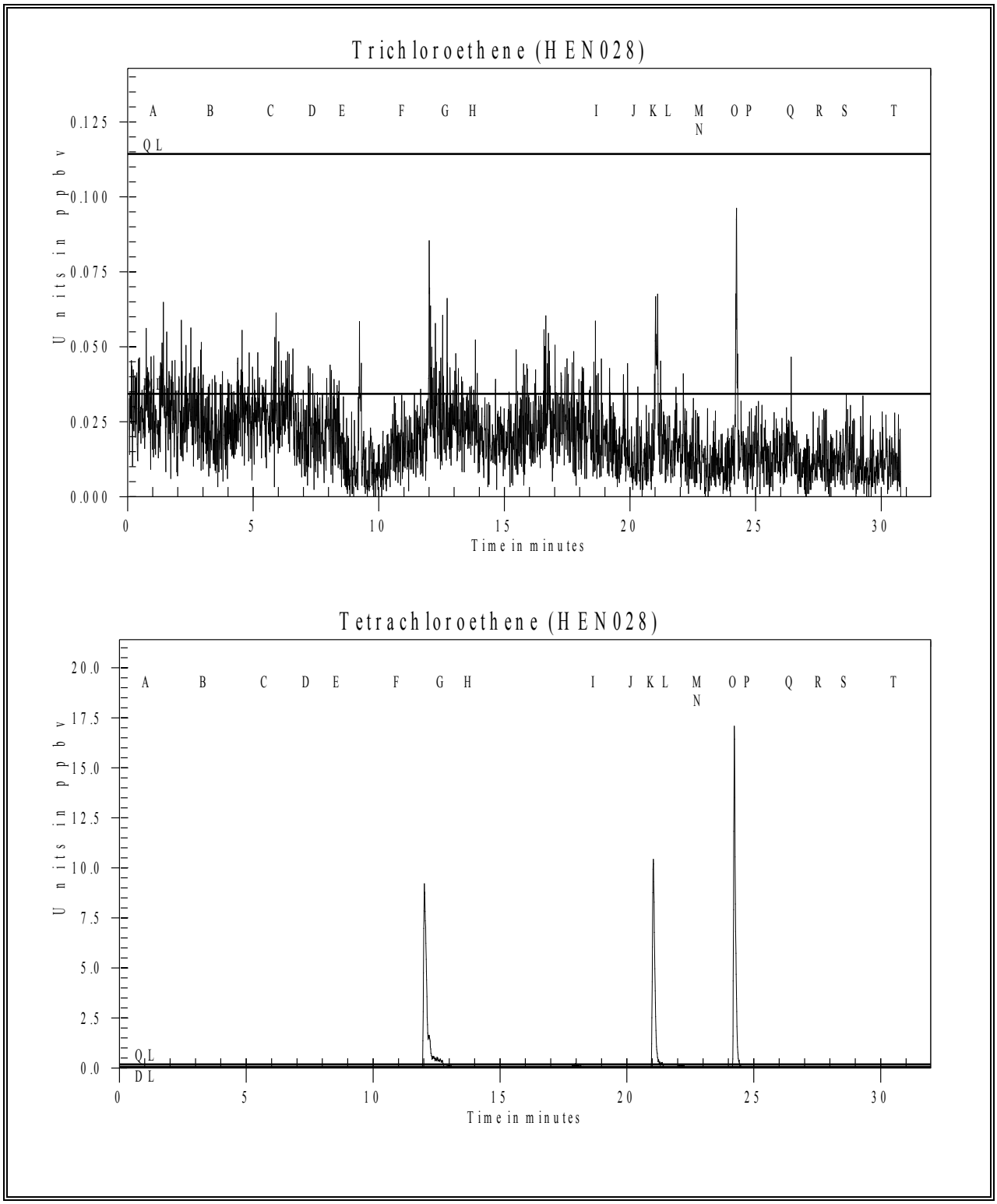


Figure 14c Mobile Monitoring at Henry's Dry Cleaners Site for Trichloroethene and Tetrachloroethene

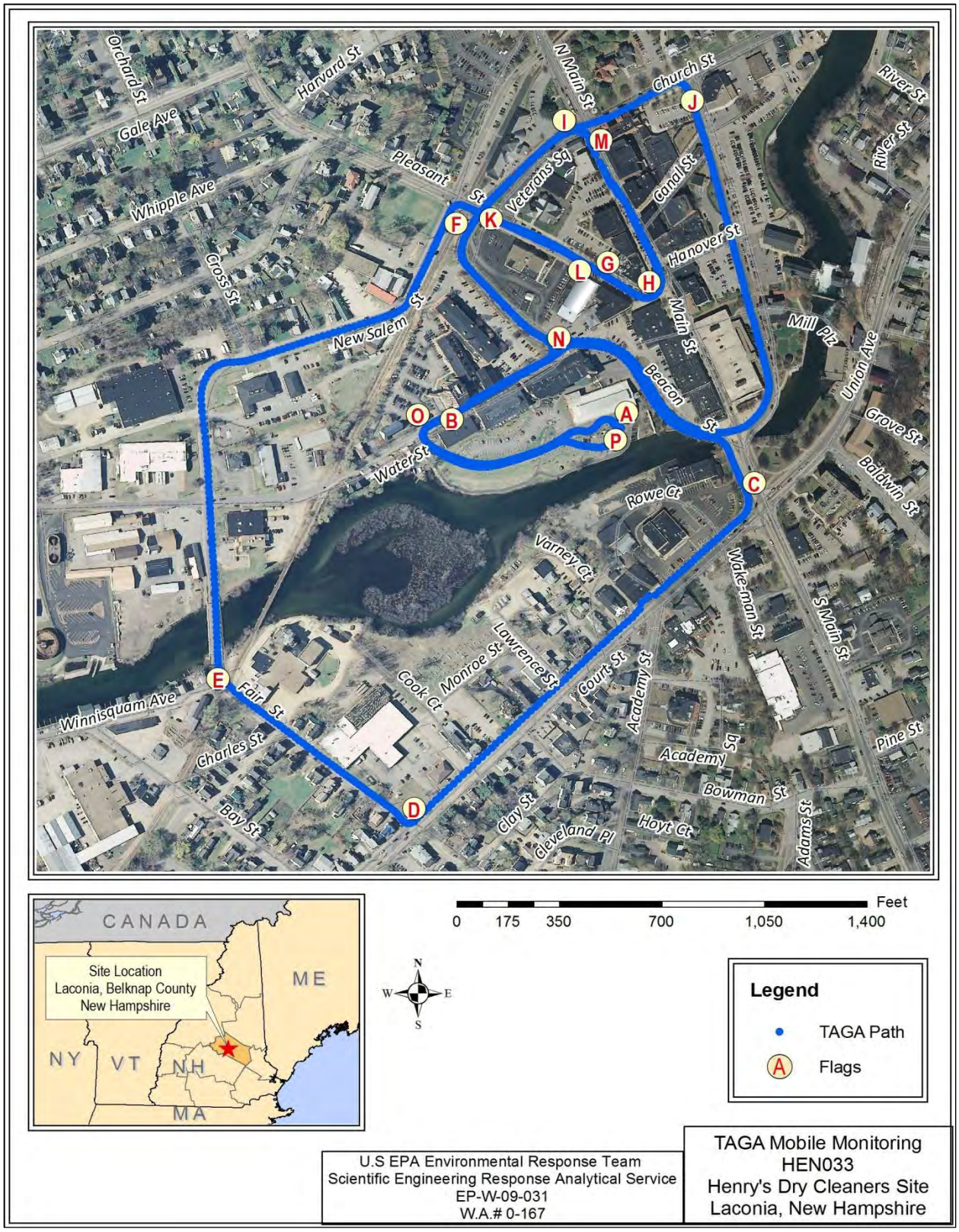


Figure 15a Mobile Monitoring Path at Henry's Dry Cleaners Site, HEN033

Figure 15b

TAGA File Event Summary
File: HEN033 Acquired on 22 March 2012 at 16:51:33 UTC
Title: Mobile Monitoring at Henry's Dry Cleaners Site

Flag	Time	Sequence	Description
A	1.5	143	Start of mobile monitoring at the command post
B	5.6	537	Turning right onto Water Street
C	7.5	710	Turning right onto Court Street
D	8.9	849	Turning right onto Fair Street
E	9.8	933	Crossing a bridge onto New Salem Street
F	12.2	1160	Turning right onto Pleasant Street
G	13.4	1281	Passing Henry's Dry Cleaners
H	14.0	1335	Turning left onto Main Street
I	15.0	1425	Turning left onto Veteran's Square
J	19.2	1827	Turning left onto Church Street
K	21.4	2033	Turning left onto Pleasant Street
L	21.9	2090	Passing Henry's Dry Cleaners
M	24.2	2309	Turning left onto Veteran's Square
N	25.3	2413	Turning right onto Water Street
O	26.0	2480	Turning left onto Landing Lane
P	28.2	2682	End of mobile monitoring at the command post

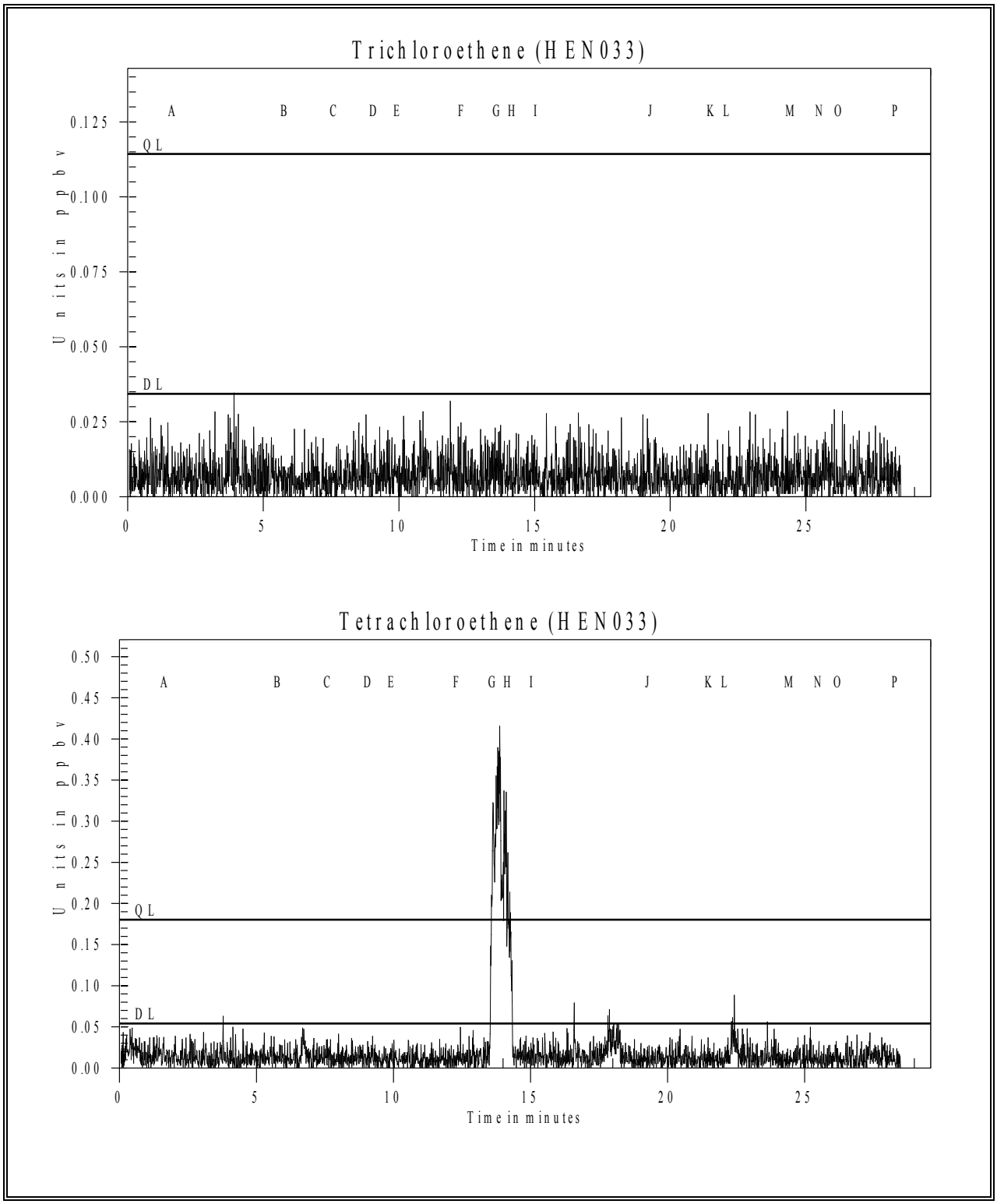


Figure 15c Mobile Monitoring at Henry's Dry Cleaners Site for Trichloroethene and Tetrachloroethene

APPENDIX A

Standard Gas Cylinder Certification

Henry's Dry Cleaners Site

Final Analytical TAGA Report

April 2012

ISO 9001:2008

Linde **SPECTRA** Environmental Gases, 80 Industrial Drive, Alpha, NJ 08865

THE LINDE GROUP

SHIPPED TO: Lockheed Martin
2890 Woodbridge Ave.
Edison, NJ 08837-3679

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	108500963	**Cylinder Size:**	2A (8" X 47.5")
Production#:	2784750	**Cylinder # :**	CC-162975
Certification Date:	Oct-31-2011	**Cylinder Pressure:**	1200 psig
P.O.# :	CC-Charles 10-19	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	14004551	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	2400 Liter
Expiration Date:	Oct-31-2012	**Blend Tolerance:**	5% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Vinyl Chloride	75-01-4	20.0 ppm	20.7 ppm
1,1-Dichloroethene	75-35-4	20.0 ppm	21.2 ppm
Benzene	71-43-2	20.0 ppm	20.7 ppm
Trichloroethylene	79-01-6	20.0 ppm	20.3 ppm
Toluene	108-88-3	20.0 ppm	20.6 ppm
Tetrachloroethylene	127-18-4	20.0 ppm	20.2 ppm
p-xylene	106-42-3	10.0 ppm	10.3 ppm
m-xylene	108-38-3	10.0 ppm	10.3 ppm
o-xylene	95-47-6	10.0 ppm	10.4 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Lou Lorenzetti

DATE: Oct-31-2011

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

APPENDIX B

Compiled Meteorological Data

Henry's Dry Cleaners Site

Final Analytical TAGA Report

April 2012

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/17/2012	15	39	36	89	0	0	29.56	0
3/17/2012	35	36	34	92	6	250	29.58	0
3/17/2012	55	36	34	92	0	0	29.59	0
3/17/2012	115	34	30	85	0	0	29.59	0
3/17/2012	155	30	28	92	0	0	29.61	0
3/17/2012	215	30	28	92	0	0	29.61	0
3/17/2012	235	30	28	92	0	0	29.61	0
3/17/2012	255	30	28	92	0	0	29.61	0
3/17/2012	315	30	28	92	0	0	29.62	0
3/17/2012	335	30	28	92	0	0	29.62	0
3/17/2012	355	30	28	92	0	0	29.63	0
3/17/2012	435	30	28	92	3	110	29.66	0
3/17/2012	455	30	28	92	0	0	29.67	0
3/17/2012	515	30	30	100	0	0	29.67	0
3/17/2012	535	32	30	92	0	0	29.68	0
3/17/2012	555	32	30	92	0	0	29.68	0
3/17/2012	615	32	30	92	3	90	29.69	0
3/17/2012	635	32	30	92	0	0	29.7	0
3/17/2012	655	34	30	85	0	0	29.71	0
3/17/2012	715	34	30	85	0	0	29.72	0
3/17/2012	735	34	30	85	0	0	29.73	0
3/17/2012	755	36	34	92	0	0	29.74	0
3/17/2012	815	36	34	92	0	0	29.75	0
3/17/2012	835	37	36	96	0	0	29.75	0
3/17/2012	915	39	36	89	3	90	29.76	0
3/17/2012	935	39	37	93	0	0	29.76	0
3/17/2012	955	39	36	89	5	90	29.77	0
3/17/2012	1015	39	36	89	3	80	29.76	0
3/17/2012	1035	43	37	79	0	0	29.77	0
3/17/2012	1055	45	39	80	0	0	29.77	0
3/17/2012	1115	45	39	80	0	0	29.76	0
3/17/2012	1135	46	37	71	5	240	29.76	0
3/17/2012	1215	46	39	77	7	230	29.76	0
3/17/2012	1335	48	39	71	0	0	29.74	0
3/17/2012	1355	48	37	66	3	220	29.74	0
3/17/2012	1415	48	37	66	5	150	29.73	0
3/17/2012	1435	48	37	66	8	250	29.73	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/17/2012	1455	50	37	61	6	260	29.73	0
3/17/2012	1515	52	37	57	5	230	29.73	0
3/17/2012	1535	52	37	57	6	260	29.72	0
3/17/2012	1555	52	37	57	7	220	29.72	0
3/17/2012	1615	52	37	57	7	230	29.72	0
3/17/2012	1635	52	37	57	8	220	29.72	0
3/17/2012	1655	50	37	61	7	180	29.72	0
3/17/2012	1715	50	37	61	6	190	29.72	0
3/17/2012	1735	48	37	66	5	180	29.73	0
3/17/2012	1755	48	37	66	3	200	29.73	0
3/17/2012	1815	46	37	71	0	0	29.73	0
3/17/2012	1835	45	37	74	0	0	29.73	0
3/17/2012	1855	45	37	74	3	220	29.73	0
3/17/2012	1915	45	37	74	3	240	29.73	0
3/17/2012	1955	43	37	79	6	260	29.73	0
3/17/2012	2015	39	36	89	3	270	29.73	0
3/17/2012	2035	37	36	96	3	220	29.73	0
3/17/2012	2055	39	36	89	0	0	29.73	0
3/17/2012	2115	37	34	89	6	240	29.72	0
3/17/2012	2135	37	34	89	0	0	29.73	0
3/17/2012	2215	37	34	89	3	260	29.72	0
3/17/2012	2235	37	34	89	6	230	29.71	0
3/17/2012	2255	36	34	92	0	0	29.71	0
3/17/2012	2315	37	34	89	0	0	29.7	0
3/17/2012	2335	36	34	92	3	250	29.7	0
3/17/2012	2355	36	34	92	6	230	29.69	0
3/18/2012	15	36	34	92	7	230	29.69	0
3/18/2012	55	36	32	85	6	260	29.69	0
3/18/2012	115	37	36	96	6	250	29.69	0
3/18/2012	135	36	34	92	3	260	29.69	0
3/18/2012	155	34	32	92	6	260	29.68	0
3/18/2012	215	34	32	92	7	250	29.68	0
3/18/2012	235	36	34	92	8	240	29.67	0
3/18/2012	255	34	32	92	8	250	29.66	0
3/18/2012	335	34	32	92	8	250	29.65	0
3/18/2012	355	34	32	92	8	250	29.65	0
3/18/2012	415	34	32	92	10	250	29.65	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/18/2012	435	34	32	92	9	250	29.65	0
3/18/2012	455	36	34	92	9	260	29.65	0
3/18/2012	515	36	34	92	7	250	29.65	0
3/18/2012	535	36	34	92	7	250	29.65	0
3/18/2012	615	36	34	92	9	260	29.65	0
3/18/2012	635	36	32	85	10	260	29.65	0
3/18/2012	655	36	32	85	9	260	29.65	0
3/18/2012	715	36	34	92	10	250	29.66	0
3/18/2012	735	37	36	96	9	250	29.65	0
3/18/2012	755	39	36	89	8	250	29.65	0
3/18/2012	835	45	37	74	8	260	29.66	0
3/18/2012	855	48	39	71	6	260	29.65	0
3/18/2012	915	52	39	61	6	250	29.65	0
3/18/2012	935	54	41	62	8	250	29.64	0
3/18/2012	955	55	43	64	9	250	29.63	0
3/18/2012	1015	57	43	60	7	240	29.63	0
3/18/2012	1035	63	45	52	8	240	29.62	0
3/18/2012	1115	64	45	50	9	230	29.61	0
3/18/2012	1135	66	45	47	10	240	29.61	0
3/18/2012	1155	70	45	41	9	220	29.6	0
3/18/2012	1215	72	46	40	11	220	29.59	0
3/18/2012	1235	72	46	40	11	230	29.58	0
3/18/2012	1255	73	46	38	10	240	29.57	0
3/18/2012	1315	73	45	37	9	210	29.56	0
3/18/2012	1335	75	43	32	13	250	29.55	0
3/18/2012	1415	77	39	26	11	260	29.54	0
3/18/2012	1435	77	39	26	7	240	29.53	0
3/18/2012	1455	77	39	26	9	210	29.52	0
3/18/2012	1515	79	39	24	7	260	29.52	0
3/18/2012	1535	79	37	22	8	240	29.52	0
3/18/2012	1555	79	36	21	8	230	29.51	0
3/18/2012	1615	79	36	21	7	240	29.51	0
3/18/2012	1655	75	39	27	8	240	29.51	0
3/18/2012	1715	73	43	34	8	230	29.51	0
3/18/2012	1735	73	41	32	3	250	29.51	0
3/18/2012	1755	68	43	41	3	250	29.51	0
3/18/2012	1815	64	43	47	0	0	29.51	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/18/2012	1835	61	43	52	0	0	29.5	0
3/18/2012	1915	57	43	60	0	0	29.5	0
3/18/2012	1935	55	43	64	0	0	29.5	0
3/18/2012	1955	55	43	64	5	260	29.5	0
3/18/2012	2015	61	43	52	6	250	29.51	0
3/18/2012	2035	57	43	60	3	260	29.51	0
3/18/2012	2055	54	43	67	0	0	29.51	0
3/18/2012	2155	52	43	72	5	250	29.52	0
3/18/2012	2215	52	43	72	5	260	29.52	0
3/18/2012	2235	50	41	71	3	310	29.52	0
3/18/2012	2255	48	41	77	0	0	29.52	0
3/18/2012	2315	48	43	83	0	0	29.52	0
3/18/2012	2335	48	41	77	0	0	29.52	0
3/19/2012	15	45	39	80	5	230	29.52	0
3/19/2012	35	46	39	77	0	0	29.52	0
3/19/2012	55	45	39	80	7	230	29.52	0
3/19/2012	115	46	41	83	6	250	29.52	0
3/19/2012	135	45	39	80	7	250	29.52	0
3/19/2012	155	45	39	80	5	260	29.51	0
3/19/2012	255	43	39	86	6	220	29.52	0
3/19/2012	315	43	39	86	5	240	29.52	0
3/19/2012	335	43	39	86	6	230	29.53	0
3/19/2012	355	41	37	86	6	220	29.53	0
3/19/2012	415	43	39	86	3	230	29.54	0
3/19/2012	435	43	37	79	0	0	29.54	0
3/19/2012	455	41	37	86	8	230	29.55	0
3/19/2012	515	41	37	86	3	220	29.56	0
3/19/2012	535	41	37	86	3	240	29.56	0
3/19/2012	555	41	37	86	0	0	29.56	0
3/19/2012	615	41	37	86	0	0	29.56	0
3/19/2012	635	43	37	79	5	260	29.57	0
3/19/2012	655	45	39	80	0	0	29.57	0
3/19/2012	735	46	39	77	5	230	29.58	0
3/19/2012	755	48	41	77	5	210	29.58	0
3/19/2012	815	52	43	72	5	220	29.59	0
3/19/2012	835	54	45	72	0	0	29.59	0
3/19/2012	855	57	45	64	5	230	29.59	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/19/2012	915	55	43	64	7	60	29.59	0
3/19/2012	955	57	43	60	8	80	29.6	0
3/19/2012	1015	57	43	60	7	60	29.6	0
3/19/2012	1035	61	43	52	5	80	29.59	0
3/19/2012	1055	61	43	52	5	60	29.6	0
3/19/2012	1115	64	45	50	5	80	29.59	0
3/19/2012	1135	68	46	45	3	20	29.59	0
3/19/2012	1155	72	46	40	6	60	29.59	0
3/19/2012	1235	72	46	40	6	70	29.58	0
3/19/2012	1255	72	46	40	8	40	29.58	0
3/19/2012	1315	72	46	40	5	50	29.58	0
3/19/2012	1335	72	46	40	5	30	29.57	0
3/19/2012	1355	72	46	40	8	20	29.57	0
3/19/2012	1415	72	46	40	6	40	29.58	0
3/19/2012	1435	68	45	44	13	70	29.58	0
3/19/2012	1515	70	45	41	17	70	29.58	0
3/19/2012	1535	70	45	41	13	80	29.58	0
3/19/2012	1555	70	45	41	9	70	29.59	0
3/19/2012	1615	66	45	47	10	40	29.59	0
3/19/2012	1635	64	43	47	13	60	29.61	0
3/19/2012	1655	63	43	48	11	50	29.61	0
3/19/2012	1715	61	43	52	14	60	29.62	0
3/19/2012	1735	61	43	52	10	60	29.62	0
3/19/2012	1755	59	41	51	8	60	29.63	0
3/19/2012	1815	57	41	55	7	60	29.63	0
3/19/2012	1835	57	39	51	7	60	29.64	0
3/19/2012	1855	55	39	55	7	50	29.65	0
3/19/2012	1915	55	39	55	8	40	29.66	0
3/19/2012	1935	54	39	57	9	50	29.67	0
3/19/2012	2015	52	39	61	10	60	29.68	0
3/19/2012	2035	52	39	61	10	80	29.69	0
3/19/2012	2055	52	39	61	10	70	29.69	0
3/19/2012	2115	50	39	66	8	60	29.68	0
3/19/2012	2135	50	39	66	8	60	29.69	0
3/19/2012	2155	50	39	66	5	50	29.69	0
3/19/2012	2215	50	39	66	3	60	29.69	0
3/19/2012	2255	48	37	66	6	50	29.69	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/19/2012	2315	48	37	66	5	30	29.69	0
3/19/2012	2335	48	37	66	5	20	29.7	0
3/19/2012	2355	46	37	71	3	10	29.7	0
3/20/2012	15	46	37	71	0	0	29.69	0
3/20/2012	35	45	37	74	0	0	29.69	0
3/20/2012	115	43	37	79	0	0	29.69	0
3/20/2012	135	43	36	76	3	320	29.69	0
3/20/2012	155	43	36	76	0	0	29.68	0
3/20/2012	215	43	36	76	6	320	29.68	0
3/20/2012	235	41	37	86	3	240	29.68	0
3/20/2012	255	41	36	82	0	0	29.68	0
3/20/2012	335	41	37	86	3	230	29.69	0
3/20/2012	355	39	36	89	0	0	29.69	0
3/20/2012	415	39	36	89	0	0	29.69	0
3/20/2012	435	39	36	89	0	0	29.7	0
3/20/2012	455	37	34	89	0	0	29.7	0
3/20/2012	515	37	36	96	0	0	29.7	0
3/20/2012	535	39	36	89	0	0	29.7	0
3/20/2012	615	39	36	89	0	0	29.71	0
3/20/2012	635	39	37	93	5	230	29.7	0
3/20/2012	655	41	37	86	5	230	29.71	0
3/20/2012	715	43	37	79	3	230	29.71	0
3/20/2012	735	45	39	80	6	230	29.71	0
3/20/2012	755	46	39	77	5	250	29.71	0
3/20/2012	835	52	41	66	8	250	29.71	0
3/20/2012	855	54	41	62	8	250	29.71	0
3/20/2012	915	55	43	64	7	250	29.71	0
3/20/2012	935	59	43	56	6	240	29.71	0
3/20/2012	955	61	45	56	7	260	29.71	0
3/20/2012	1015	63	45	52	5	270	29.7	0
3/20/2012	1115	68	46	45	5	250	29.68	0
3/20/2012	1135	70	48	46	6	250	29.68	0
3/20/2012	1155	72	48	43	5	250	29.67	0
3/20/2012	1215	73	48	41	6	240	29.66	0
3/20/2012	1235	73	50	44	8	240	29.65	0
3/20/2012	1255	75	50	42	11	240	29.64	0
3/20/2012	1315	75	52	45	11	230	29.64	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/20/2012	1355	77	50	39	9	240	29.62	0
3/20/2012	1415	77	52	42	6	180	29.61	0
3/20/2012	1435	79	52	39	7	200	29.61	0
3/20/2012	1455	79	50	36	9	230	29.6	0
3/20/2012	1515	79	52	39	9	200	29.59	0
3/20/2012	1535	79	50	36	8	240	29.59	0
3/20/2012	1555	77	50	39	7	220	29.59	0
3/20/2012	1615	79	50	36	6	250	29.59	0
3/20/2012	1655	77	50	39	5	240	29.59	0
3/20/2012	1715	75	48	39	5	230	29.59	0
3/20/2012	1735	73	50	44	5	230	29.6	0
3/20/2012	1755	72	52	50	0	0	29.59	0
3/20/2012	1815	68	50	53	0	0	29.6	0
3/20/2012	1835	64	50	61	0	0	29.6	0
3/20/2012	1915	63	48	58	0	0	29.62	0
3/20/2012	1935	61	48	63	0	0	29.63	0
3/20/2012	1955	61	48	63	0	0	29.63	0
3/20/2012	2015	61	48	63	3	250	29.64	0
3/20/2012	2035	61	48	63	3	240	29.65	0
3/20/2012	2055	61	48	63	5	250	29.66	0
3/20/2012	2115	59	48	67	0	0	29.66	0
3/20/2012	2155	55	48	77	0	0	29.66	0
3/20/2012	2215	55	48	77	0	0	29.67	0
3/20/2012	2235	55	48	77	0	0	29.66	0
3/20/2012	2255	54	46	75	0	0	29.67	0
3/20/2012	2315	55	46	72	0	0	29.67	0
3/20/2012	2335	54	46	75	5	250	29.67	0
3/20/2012	2355	57	48	72	6	250	29.67	0
3/21/2012	15	54	46	75	0	0	29.68	0
3/21/2012	35	52	46	80	5	240	29.68	0
3/21/2012	55	54	46	75	6	240	29.68	0
3/21/2012	115	52	46	80	3	250	29.69	0
3/21/2012	135	52	46	80	5	260	29.68	0
3/21/2012	155	52	46	80	6	260	29.68	0
3/21/2012	215	50	45	83	0	0	29.68	0
3/21/2012	255	48	45	89	3	230	29.69	0
3/21/2012	315	48	45	89	6	240	29.68	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
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17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/21/2012	335	46	45	96	6	250	29.68	0
3/21/2012	355	46	43	89	0	0	29.68	0
3/21/2012	415	46	45	96	5	240	29.68	0
3/21/2012	435	46	45	96	5	240	29.69	0
3/21/2012	455	46	43	89	7	250	29.69	0
3/21/2012	535	46	43	89	0	0	29.7	0
3/21/2012	555	48	45	89	5	250	29.71	0
3/21/2012	615	46	45	96	0	0	29.71	0
3/21/2012	635	48	46	93	6	240	29.72	0
3/21/2012	655	50	46	86	9	250	29.72	0
3/21/2012	715	52	46	80	8	250	29.72	0
3/21/2012	755	54	46	75	10	250	29.73	0
3/21/2012	815	55	48	77	8	260	29.73	0
3/21/2012	835	59	48	67	7	250	29.73	0
3/21/2012	855	63	50	63	7	260	29.73	0
3/21/2012	915	64	50	61	7	250	29.72	0
3/21/2012	935	66	50	57	8	250	29.72	0
3/21/2012	955	70	50	49	8	240	29.72	0
3/21/2012	1035	72	50	46	9	240	29.7	0
3/21/2012	1055	73	52	48	7	240	29.69	0
3/21/2012	1115	75	52	45	9	230	29.69	0
3/21/2012	1135	75	52	45	8	210	29.68	0
3/21/2012	1155	77	52	42	7	240	29.68	0
3/21/2012	1215	79	52	39	6	260	29.67	0
3/21/2012	1235	79	50	36	10	230	29.66	0
3/21/2012	1315	79	48	34	9	220	29.64	0
3/21/2012	1335	81	48	32	5	210	29.63	0
3/21/2012	1355	81	46	29	3	220	29.62	0
3/21/2012	1415	81	46	29	6	170	29.61	0
3/21/2012	1435	81	46	29	9	220	29.61	0
3/21/2012	1455	81	45	28	8	230	29.6	0
3/21/2012	1515	81	46	29	6	220	29.59	0
3/21/2012	1535	81	45	28	0	0	29.59	0
3/21/2012	1615	81	43	26	8	190	29.59	0
3/21/2012	1635	81	43	26	6	210	29.59	0
3/21/2012	1655	79	43	28	6	220	29.59	0
3/21/2012	1715	79	43	28	6	250	29.59	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/21/2012	1735	77	41	28	7	230	29.59	0
3/21/2012	1755	73	41	32	3	210	29.59	0
3/21/2012	1815	72	43	35	0	0	29.6	0
3/21/2012	1835	68	43	41	0	0	29.6	0
3/21/2012	1915	64	37	37	5	230	29.61	0
3/21/2012	1935	66	39	37	6	220	29.61	0
3/21/2012	1955	66	39	37	5	240	29.62	0
3/21/2012	2015	68	43	41	9	190	29.62	0
3/21/2012	2035	70	46	42	9	190	29.62	0
3/21/2012	2055	68	46	45	9	190	29.62	0
3/21/2012	2115	66	48	52	9	190	29.62	0
3/21/2012	2155	63	48	58	3	260	29.63	0
3/21/2012	2215	63	50	63	6	220	29.62	0
3/21/2012	2235	63	50	63	3	240	29.62	0
3/21/2012	2255	63	52	68	3	250	29.61	0
3/21/2012	2315	63	52	68	3	230	29.61	0
3/21/2012	2335	63	52	68	3	230	29.61	0
3/22/2012	35	55	48	77	5	250	29.6	0
3/22/2012	55	55	48	77	6	260	29.6	0
3/22/2012	115	54	46	75	6	270	29.59	0
3/22/2012	135	54	48	80	7	260	29.59	0
3/22/2012	155	52	48	86	5	260	29.58	0
3/22/2012	215	50	45	83	7	240	29.58	0
3/22/2012	235	50	46	86	5	240	29.58	0
3/22/2012	255	50	46	86	3	240	29.57	0
3/22/2012	315	52	46	80	7	250	29.56	0
3/22/2012	335	52	46	80	8	250	29.56	0
3/22/2012	355	52	46	80	8	250	29.56	0
3/22/2012	415	50	46	86	3	270	29.57	0
3/22/2012	435	48	45	89	9	250	29.57	0
3/22/2012	455	48	46	93	8	240	29.57	0
3/22/2012	515	48	45	89	9	250	29.57	0
3/22/2012	535	50	46	86	8	250	29.56	0
3/22/2012	555	48	46	93	6	260	29.56	0
3/22/2012	635	48	45	89	7	260	29.56	0
3/22/2012	655	50	46	86	8	250	29.56	0
3/22/2012	715	52	46	80	8	260	29.56	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/22/2012	735	55	48	77	7	240	29.55	0
3/22/2012	755	57	50	78	8	250	29.55	0
3/22/2012	815	61	50	67	7	250	29.55	0
3/22/2012	835	63	52	68	7	250	29.55	0
3/22/2012	915	66	52	61	7	230	29.55	0
3/22/2012	935	68	52	57	5	250	29.54	0
3/22/2012	955	70	52	53	7	240	29.53	0
3/22/2012	1015	72	52	50	8	240	29.52	0
3/22/2012	1035	73	52	48	9	240	29.52	0
3/22/2012	1055	75	50	42	8	330	29.51	0
3/22/2012	1115	77	50	39	6	250	29.51	0
3/22/2012	1135	77	50	39	10	280	29.49	0
3/22/2012	1215	81	48	32	14	290	29.48	0
3/22/2012	1235	81	46	29	7	280	29.47	0
3/22/2012	1255	81	46	29	9	260	29.45	0
3/22/2012	1315	81	45	28	8	260	29.44	0
3/22/2012	1335	81	45	28	7	280	29.43	0
3/22/2012	1355	81	45	28	14	310	29.42	0
3/22/2012	1415	82	45	27	8	290	29.41	0
3/22/2012	1435	82	45	27	8	270	29.41	0
3/22/2012	1535	82	45	27	14	330	29.39	0
3/22/2012	1555	82	45	27	11	320	29.39	0
3/22/2012	1615	82	46	28	8	300	29.39	0
3/22/2012	1635	81	46	29	6	280	29.39	0
3/22/2012	1655	81	46	29	6	320	29.39	0
3/22/2012	1715	81	46	29	6	300	29.39	0
3/22/2012	1735	79	48	34	8	320	29.4	0
3/22/2012	1815	75	48	39	5	340	29.42	0
3/22/2012	1835	73	48	41	6	320	29.43	0
3/22/2012	1855	73	48	41	7	330	29.43	0
3/22/2012	1915	73	48	41	0	0	29.44	0
3/22/2012	1935	70	48	46	3	290	29.44	0
3/22/2012	1955	72	50	46	5	260	29.44	0
3/22/2012	2015	68	50	53	6	210	29.44	0
3/22/2012	2055	68	52	57	7	280	29.44	0
3/22/2012	2115	70	52	53	5	280	29.44	0
3/22/2012	2135	70	52	53	0	0	29.44	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/22/2012	2155	70	52	53	5	270	29.44	0
3/22/2012	2215	70	52	53	3	270	29.44	0
3/22/2012	2235	68	52	57	5	260	29.44	0
3/22/2012	2255	66	52	61	0	0	29.44	0
3/22/2012	2335	64	52	65	0	0	29.45	0
3/22/2012	2355	64	50	61	5	320	29.46	0
3/23/2012	15	64	50	61	7	300	29.46	0
3/23/2012	35	64	50	61	5	280	29.46	0
3/23/2012	55	64	50	61	0	0	29.47	0
3/23/2012	115	64	48	56	5	290	29.46	0
3/23/2012	155	63	46	54	8	290	29.46	0
3/23/2012	215	63	46	54	9	290	29.46	0
3/23/2012	235	61	45	56	5	310	29.46	0
3/23/2012	255	61	45	56	7	300	29.47	0
3/23/2012	315	61	43	52	7	310	29.47	0
3/23/2012	335	61	41	48	5	300	29.48	0
3/23/2012	355	57	43	60	3	190	29.49	0
3/23/2012	435	55	43	64	6	210	29.49	0
3/23/2012	455	55	41	59	5	270	29.5	0
3/23/2012	515	57	39	51	6	290	29.51	0
3/23/2012	535	57	39	51	8	270	29.52	0
3/23/2012	555	55	37	51	7	270	29.52	0
3/23/2012	615	55	37	51	8	260	29.53	0
3/23/2012	635	57	37	47	9	270	29.54	0
3/23/2012	715	57	37	47	8	280	29.54	0
3/23/2012	735	59	36	42	8	280	29.54	0
3/23/2012	755	61	34	36	13	290	29.54	0
3/23/2012	815	61	32	34	10	340	29.55	0
3/23/2012	835	61	30	31	16	310	29.55	0
3/23/2012	855	63	30	29	9	320	29.56	0
3/23/2012	915	61	30	31	13	310	29.55	0
3/23/2012	955	63	28	27	14	300	29.54	0
3/23/2012	1015	63	28	27	15	330	29.53	0
3/23/2012	1035	63	27	26	17	300	29.53	0
3/23/2012	1055	63	27	26	13	310	29.52	0
3/23/2012	1115	64	27	25	15	310	29.52	0
3/23/2012	1135	64	27	25	17	300	29.52	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/23/2012	1155	64	27	25	17	330	29.51	0
3/23/2012	1215	66	27	23	16	320	29.5	0
3/23/2012	1255	66	27	23	15	300	29.47	0
3/23/2012	1315	68	27	21	13	270	29.46	0
3/23/2012	1335	68	27	21	10	300	29.45	0
3/23/2012	1355	70	25	18	18	290	29.45	0
3/23/2012	1415	68	19	15	15	280	29.44	0
3/23/2012	1435	66	18	16	14	310	29.44	0
3/23/2012	1455	66	16	14	16	300	29.43	0
3/23/2012	1515	68	14	12	18	320	29.43	0
3/23/2012	1555	66	12	12	11	280	29.43	0
3/23/2012	1615	66	12	12	16	310	29.43	0
3/23/2012	1635	64	12	13	14	320	29.44	0
3/23/2012	1655	64	12	13	13	310	29.44	0
3/23/2012	1715	64	12	13	13	280	29.45	0
3/23/2012	1735	63	14	15	14	290	29.44	0
3/23/2012	1755	61	16	17	5	300	29.45	0
3/23/2012	1835	57	19	23	7	210	29.46	0
3/23/2012	1855	57	19	23	5	260	29.46	0
3/23/2012	1915	57	19	23	5	300	29.47	0
3/23/2012	1935	57	18	22	9	320	29.48	0
3/23/2012	1955	57	16	20	7	310	29.48	0
3/23/2012	2015	57	16	20	8	300	29.48	0
3/23/2012	2035	55	18	23	5	330	29.48	0
3/23/2012	2115	54	18	24	5	100	29.48	0
3/23/2012	2135	54	18	24	0	0	29.48	0
3/23/2012	2155	52	19	27	8	270	29.48	0
3/23/2012	2215	54	18	24	9	290	29.48	0
3/23/2012	2235	54	18	24	6	290	29.48	0
3/23/2012	2255	54	16	22	9	310	29.49	0
3/23/2012	2315	54	12	19	8	310	29.49	0
3/23/2012	2335	54	10	17	9	290	29.49	0
3/23/2012	2355	54	10	17	6	280	29.5	0
3/24/2012	15	54	10	17	9	300	29.5	0
3/24/2012	35	52	10	18	10	310	29.51	0
3/24/2012	55	52	10	18	3	250	29.51	0
3/24/2012	115	52	10	18	6	280	29.51	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/24/2012	135	52	10	18	3	280	29.51	0
3/24/2012	155	52	10	18	3	280	29.51	0
3/24/2012	235	50	10	20	3	300	29.5	0
3/24/2012	255	48	12	23	3	330	29.51	0
3/24/2012	315	48	14	25	3	250	29.51	0
3/24/2012	335	48	18	30	0	0	29.51	0
3/24/2012	355	46	18	33	0	0	29.51	0
3/24/2012	415	46	19	34	0	0	29.51	0
3/24/2012	435	46	19	34	0	0	29.52	0
3/24/2012	515	46	18	33	0	0	29.53	0
3/24/2012	535	46	18	33	0	0	29.53	0
3/24/2012	555	45	21	39	0	0	29.54	0
3/24/2012	615	45	19	35	0	0	29.54	0
3/24/2012	635	45	19	35	0	0	29.54	0
3/24/2012	655	46	19	34	0	0	29.54	0
3/24/2012	715	46	14	27	0	0	29.54	0
3/24/2012	755	48	14	25	5	250	29.55	0
3/24/2012	815	48	12	23	3	220	29.55	0
3/24/2012	835	48	14	25	0	0	29.56	0
3/24/2012	855	48	14	25	5	260	29.55	0
3/24/2012	915	50	14	24	3	210	29.56	0
3/24/2012	935	48	16	28	6	20	29.55	0
3/24/2012	955	48	16	28	8	50	29.55	0
3/24/2012	1035	50	18	28	7	30	29.55	0
3/24/2012	1055	52	16	24	5	90	29.53	0
3/24/2012	1115	52	18	26	0	0	29.52	0
3/24/2012	1135	55	19	24	0	0	29.52	0
3/24/2012	1155	55	18	23	13	240	29.51	0
3/24/2012	1215	55	19	24	3	150	29.51	0
3/24/2012	1235	55	18	23	3	280	29.5	0
3/24/2012	1315	55	18	23	10	260	29.48	0
3/24/2012	1335	55	18	23	7	220	29.47	0
3/24/2012	1355	55	16	21	6	230	29.47	0
3/24/2012	1415	55	18	23	6	240	29.46	0
3/24/2012	1435	55	18	23	8	230	29.46	0
3/24/2012	1455	55	19	24	7	210	29.46	0
3/24/2012	1515	55	19	24	6	230	29.45	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

Local Climatological Data-Hourly Observations Table
Laconia, New Hampshire
Elevation: 545 ft. above sea level
Latitude: 43.573
Longitude: -71.417
17 through 24 March 2012

Date	Time (LST)	Dry Bulb Temperature (F)	Dew Point Temperature (F)	Relative Humidity (%)	Wind Speed (MPH)	Wind Direction (deg.)	Station Pressure (in. Hg)	Precipitation Total (inches)
3/24/2012	1535	55	21	27	7	210	29.45	0
3/24/2012	1555	55	25	31	9	190	29.45	0
3/24/2012	1615	54	25	33	8	190	29.45	0
3/24/2012	1635	54	25	33	9	220	29.44	0
3/24/2012	1655	54	25	33	8	220	29.45	0
3/24/2012	1715	54	27	35	7	210	29.45	0
3/24/2012	1735	54	27	35	7	210	29.45	0
3/24/2012	1815	52	27	38	6	230	29.46	0
3/24/2012	1835	50	28	43	5	210	29.45	0
3/24/2012	1855	48	28	46	7	230	29.45	0
3/24/2012	1915	48	30	50	3	210	29.45	0
3/24/2012	1935	48	30	50	3	230	29.45	0
3/24/2012	1955	48	30	50	3	220	29.45	0
3/24/2012	2015	48	30	50	6	230	29.44	0
3/24/2012	2055	48	30	50	6	210	29.44	0
3/24/2012	2115	48	30	50	5	210	29.44	0
3/24/2012	2135	46	34	63	0	0	29.44	0
3/24/2012	2155	46	36	68	5	240	29.43	0
3/24/2012	2215	46	34	63	6	210	29.43	0
3/24/2012	2235	46	34	63	3	240	29.43	0
3/24/2012	2255	46	34	63	0	0	29.43	0
3/24/2012	2335	46	32	58	0	0	29.43	0
3/24/2012	2355	46	30	54	3	210	29.43	0

Wind direction is the direction from which the wind is blowing.

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	deg	=	degree
%	=	Percent	in. Hg	=	inches of mercury

.

APPENDIX D

Field Worksheets

Henry's Dry Cleaners Site

Trip Report

May 2012

EPA/Environmental Response Team
Scientific, Engineering, Response & Analytical Services (SERAS) Contract
Tedlar® Bag Sampling Work Sheet

Lockheed Martin Corp., Edison, NJ
EPA Contract No. EP-W-09-031

Site: HENRY'S DRY CLEANERS

WA#: 0-167

Sampler: WEEKS

EPA/ERT WAM: MECKUNAS

Date: 3/21/12

SERAS Task Leader: THOMPSON

Sample #	B 51100	B 51101	B 51102	B 51103	B 51104
Location	BLDG-6 SS-01	BLDG-6 SS-02	BLDG.-6 SS-03	BLDG.-6 SS-04	BLDG.-8 SS-01
Time	1205	1215	1220	1220	1245
Media	Tedlar®	Tedlar®	Tedlar®	Tedlar®	Tedlar®
Analysis/Method	LOOP GC/MS	LOOP GC/MS	LOOP GC/MS	LOOP GC/MS	LOOP GC/MS
Sample Volume	1L	1L	1L	1L	1L
MET Station on Site? Y (N)					

SS = SUB SLAB SOIL GAS

EPA/Environmental Response Team
Scientific, Engineering, Response & Analytical Services (SERAS) Contract
Tedlar® Bag Sampling Work Sheet

Lockheed Martin Corp., Edison, NJ
EPA Contract No. EP-W-09-031

Site: HENRY'S Dry CLEANERS
WA#: 0-167
Sampler: Weeks
EPA/ERT WAM: MICKUNITS
Date: 03/21/12
SERAS Task Leader: Thompson

Sample #	B 51105	B 51106	B 51107	B 51108	B 51109
Location	BLDG.-8 SS-02	BLDG.-8 SS-03	BLDG.-H SS-01	BLDG.-H SS-02	BLDG.-H SS-03
Time	1250	~~1615~~	1615	1625	1630
Media	Tedlar®	Tedlar®	Tedlar®	Tedlar®	Tedlar®
Analysis/Method	Loop GC/MS	Loop GC/MS	Loop GC/MS	Loop GC/MS	Loop GC/MS
Sample Volume	1L	1L	1L	1L	1L
MET Station on Site? Y (N)					

SS = Sub-Slab Soil Gas

EPA/Environmental Response Team
Scientific, Engineering, Response & Analytical Services (SERAS) Contract
Tedlar® Bag Sampling Work Sheet

Lockheed Martin Corp., Edison, NJ
EPA Contract No. EP-W-09-031

Site: HENRY'S DRY CLEANERS
WA#: 0-167
Sampler: WEEKS
EPA/ERT WAM: MICKUNAS
Date: 3/21/12
SERAS Task Leader: THOMPSON

Sample #	B 51110	B 51111	B 51112		
Location	BLDG. - GW SS-01	BLDG. - PI SS-01	BLDG. - PI SS-02		
Time	1750	1755	1800		
Media	Tedlar®	Tedlar®	Tedlar®	Tedlar®	Tedlar®
Analysis/Method	LOOP GC/MS	LOOP GC/MS	LOOP GC/MS		
Sample Volume	1L	1L	1L		
MET Station on Site? Y (N)					

SS = SUB SLAB SOIL GAS

EPA/Environmental Response Team
Scientific Engineering Response and Analytical Services
Tedlar Bag Sampling Work Sheet
Lockheed Martin Corp., Edison, NJ
U.S. EPA Contract No. EP-W-09-031

Site: Henry's Dry Cleaners Site

WA#: 0-167

EPA Representative: MICKUNAS

U.S. EPA/ERTC WAM: David Mickunas

Date: 3 / 21 / 2012

SERAS Task Leader: Scott J. Thompson

Sample #	Location	Sub Location	Time	Tedlar Bag Analysis/Method	Sample Volume (Liters)
B 51113	BLDG.-3	SS-1-01	1840	GC/MS Loop Injection	1L
B 51114	BLDG.-3	SS-1-02	1850	↓	↓
B 51115	BLDG.-3	SS-1-03	1900	↓	↓
B 51116	BLDG.-3	SS-2-01	1905	↓	↓
B 51117	BLDG.-3	SS-2-02	1910	↓	↓
B 51118	BLDG.-3	SS-2-03	1915	↓	↓
B 51119	BLDG.-3	SS-2-04	1920	↓	↓
B 51120	BLDG-P2	SS-01	1935	↓	↓
B 51121	BLDG-P2	SS-02	1940	↓	↓
B 51122	BLDG-P2	SS-03	1945	↓	↓
B 51123	BLDG-P2	SS-04	1950	↓	↓

Sampler (Print Name) WEEKS

Sampler (Signature)

Comments:
SS = SUB SLAB SOIL GAS

EPA Environmental Response Team
Scientific, Engineering, Response and Analytical Services (SERAS) Contract
SUMMA Sampling Worksheet
Lockheed Martin Corp., Edison, NJ
U.S. EPA Contract No. EP-W-09-031

Site: Henry's Dry Cleaners Site
Sampler: Scott J. Thompson
Date: 03/21/2012

WA#: 0-167
ERT WAM: David Mickunas
SERAS TL: Scott J. Thompson

Sample #	Location	Sub-Location	Matrix	SUMMA #	Orifice #	Analysis/ Method	Intial Pressure (in. Hg)	Start Flow Rate (ml/min)	Time (Start)	Date (Start)	Time (Stop)	Date (Stop)	Post Pressure (in. Hg)	Comments
167-001	unit 006	IA1	Air	BC1831	BC ~~3356~~ 3356	TO-15	-30	2.95	08:55	3/21/12	08:45	03/22/10	-9	Bld 6 Locker Room Box (1) Pic 3/2
167-002	unit002	IA1	Air	BC1290	BC3429	TO-15	-30	3.30	09:21		08:52		-8	Bld 6 ~~#~~ 103 Box (1) Pic 4/2
167-003	unit 003	IA1	Air	BC1447	BC3062	TO-15	-30	2.85	09:49		09:53		-9	Bld 6 # 106 Box (1) Pic 5/28
167-004	unit 005	IA1	Air	BC1091	BC3100	TO-15	-30	3.10	10:36		10:04		-9.5	Bld 6 # 116 Box (2) Pic 6/2
167-005	unit 005	IA2	Air	BC1041	BC3355	TO-15	-30	2.95	10:36		10:04		-13.5	Bld 6 # 116 Box (1) Pic 6
167-006	unit 004	IA1	Air	BC1328	BC3359	TO-15	-30	3.20	10:59		10:12		-10.5	Bld 6 # 114 Box (2) Pic 7/3
167-007	unit 001	IA1	Air	BC1506	BC3360	TO-15	-30	2.90	11:34		11:24		-10	Bld 6 #101 Box (2) Pic 8/
167-008	unit 007	IA1	Air	BC1811	BC3414	TO-15	-30	2.85	01:54		01:38		-9	Bld 8 # 001 Box (3) Pic 9
167-009	unit 007	IA2	Air	BC1503	BC3098	TO-15	-30	2.90	01:54		01:38		-9	Bld 8 #001 Box (2) Pic 9
167-010	unit 010	IA1	Air	BC1325	BC3434	TO-15	-30	3.10	02:18		03:33		-10	Bld 8 #014 Box (3) Pic 10/

REMARKS:

EPA Environmental Response Team
Scientific, Engineering, Response and Analytical Services (SERAS) Contract
SUMMA Sampling Worksheet
Lockheed Martin Corp., Edison, NJ
U.S. EPA Contract No. EP-W-09-031

Site: Henry's Dry Cleaners Site
Sampler: Scott J. Thompson
Date: 03/21/12

WA#: 0-167
ERT WAM: David Mickunas
SERAS TL: Scott J. Thompson

Sample #	Location	Sub-Location	Matrix	SUMMA #	Orifice #	Analysis/ Method	Intial Pressure (in. Hg)	Start Flow Rate (ml/min)	Time (Start)	Date (Start)	Time (Stop)	Date (Stop)	Post Pressure (in. Hg)	Comments
167-011	unit 009	IA1	Air	BC1275	BC3060	TO-15	-30	2.85	03:35	03/21/12	2:38	3/22/12	-9.5	Bld 8 #4 Box 3 Pic 11
167-012	unit 008	IA1	Air	BC1697	BC3345	TO-15	-30	2.95	03:04	↓	2:41	↓	-10.5	Bld 8 #3 Box 3 Pic 13
167-013	unit 011	IA1	Air	BC1635	BC3305	TO-15	-30	2.95	3:36	↓	3:37	↓	-8.5	Bld 8 #17 Box 4 Pic 14
167-014	unit 012	IA1	Air	BC1814	~~BC1814~~ 3396	TO-15	-30	2.85	3:58	↓	3:44	↓	-8.5	Bld 8 #19 Box 4 *All windows open Pic 15
167-015	Amb 001	OA1	Air	BC1496	BC3045	TO-15	-30	3.20	6:52	↓	5:30	↓	-7.5	Box 4
167-016	Amb 001	OA2	Air	BC1296	BC3409	TO-15	-30	3.10	6:52	↓	5:30	↓	-9.5	Box 4 Pic 16
167-017	Amb 002	OA1	Air	BC1128	BC3416	TO-15	-30	2.90	6:57	↓	5:35	↓	-9	Box 5 Pic 17
167-021	TRIP BLANK	X	X	1858 BC1872		TO-15	-30	X	7:00	↓	5:40	3/22/12		TRIP BLANK Box 6
167-018	~~Stack 002~~ BLDG 6	~~OA1~~ Port 3	Grab	BC1412	BC3044	TO-15	-30	X	12:00	03/22/12	12:05	3/22/12	-0	Stack 003 Box 5 Grab Full List
167-019	BLDG 6	Port 2	Grab	BC1830	BC3046	TO-15	-30	X	12:10	↓	12:10	↓	-0	Stack 002 Box 5 Grab Full List

REMARKS:

3

EPA Environmental Response Team
Scientific, Engineering, Response and Analytical Services (SERAS) Contract
SUMMA Sampling Worksheet
Lockheed Martin Corp., Edison, NJ
U.S. EPA Contract No. EP-W-09-031

Site: Henry's Dry Cleaners Site
Sampler: Scott J. Thompson
Date: 03/21/12

WA#: 0-167
ERT WAM: David Mickunas
SERAS TL: Scott J. Thompson

Sample #	Location	Sub-Location	Matrix	SUMMA #	Orifice #	Analysis/ Method	Intial Pressure (in. Hg)	Start Flow Rate (ml/min)	Time (Start)	Date (Start)	Time (Stop)	Date (Stop)	Post Pressure (in. Hg)	Comments
167 020	BLDG 6	Port 1	Grab	BC1817	BC3417	TO-15	-30		12:15	3/22/12	12:15	3/22/12	-0	SJM0001 Box 5 Grab Full List 5
						TO-15								
						TO-15								
						TO-15								
						TO-15								
						TO-15								
						TO-15								
						TO-15								
						TO-15								
						TO-15								

REMARKS: